

REMARKS:	WELL LOG	ELECTRIC LOGS	<input checked="" type="checkbox"/> FIL	WATER SANDS	LOCATION INSPECTED	SUB. REPORT/abd.
DATE FILED 12-4-86						
LAND: FEE & PATENTED		STATE LEASE NO.		PUBLIC LEASE NO.	U-20895	INDIAN
DRILLING APPROVED:		12-16-86				
SPUDED IN:		1-15-87				
COMPLETED:		3-3-87 POW PUT TO PRODUCING: 3-3-87				
INITIAL PRODUCTION:		482 BOPD 519 MCSD 11 BWPD				
GRAVITY A.P.I.		39.5°				
GOR:		1077:1				
PRODUCING ZONES:		5259-5849' 15m4				
TOTAL DEPTH:		618'				
WELL ELEVATION:		5133' 6L				
DATE ABANDONED:						
FIELD:		WILDCAT Kachina				
UNIT:						
COUNTY:		SAN JUAN				
WELL NO.		HAVASU FEDERAL 42-24		API #43-037-31298		
LOCATION		1970' FNL FT. FROM (N) (S) LINE. 461' FEL		FT. FROM (E) (W) LINE. SE NE		1/4 - 1/4 SEC. 24
TWP.	RGE.	SEC.	OPERATOR			
38S	23E	24	MERIDIAN OIL INC.			

TWP.	RGE.	SEC.	OPERATOR	TWP.	RGE.	SEC.	OPERATOR
38S	23E	24	MERIDIAN OIL INC.				

GEOLOGIC TOPS:

QUATERNARY	Star Point	Chinle	1965	Molas
Alluvium	Wahweap	Shinarump	2900	Manning Canyon
Lake beds	Masuk	Moenkopi		Mississippian
Pleistocene	Colorado	Sinbad		Humbug
Lake beds	Sego	PERMIAN		Brazer
TERTIARY	Buck Tongue	Kaibab		Pilot Shale
Pliocene	Castlegate	Coconino		Madison
Salt Lake	Mancos	Cutler	3030	Leadville
Oligocene	Upper	Hoskinnini		Redwall
Norwood	Middle	DeChelly		DEVONIAN
Eocene	Lower	White Rim		Upper
Duchesne River	Emery	Organ Rock		Middle
Uinta	Blue Gate	Cedar Mesa		Lower
Bridger	Ferron	Halgaite Tongue		Ouray
Green River	Frontier	Phosphoria		Elbert
	Dakota	Park City		McCracken
	Burro Canyon	Rico (Goodridge)		Aneth
	Cedar Mountain	Supai		Simonson Dolomite
	Buckhorn	Wolfcamp		Sevy Dolomite
	JURASSIC	CARBON I FEROUS		North Point
Wasatch	Morrison	Pennsylvanian		SILURIAN
Stone Cabin	Salt Wash	Oquirrh		Laketown Dolomite
Colton	San Rafael Gr.	Weber		ORDOVICIAN
Flagstaff	Summerville	Morgan		Eureka Quartzite
North Horn	Bluff Sandstone	Hermosa	4760	Pogonip Limestone
Almy	Curtis	10m Y	5726	CAMBRIAN
Paleocene	Entrada	Redox A SHALE	5881	Lynch
Current Creek	Moab Tongue	Ismay	5898	Bowman
North Horn	Carmel	Desert Creek GORNIC	5950	Tapeats
CRETACEOUS	Glen Canyon Gr.	Almah DSCR	5989	Ophir
Montana	Navajo	Barker Creek CMYRK	6061	Tintic
Mesaverde	Kayenta	AKAH	6084	PRE - CAMBRIAN
Price River	Wingate	Cane Creek		
Blackhawk	TRIASSIC			

MERIDIAN OIL

December 2, 1986

State of Utah Natural Resources
Oil, Gas and Mining
355 W. North Temple
3 Triad Center, Suite 350
Salt Lake City, Utah 84180-1203

Attention: Arlene Sollis

RECEIVED
DEC 04 1986

**DIVISION OF
OIL, GAS & MINING**

Re: Application for Permit to Drill
42-24 Havasu-Federal
SENE Section 24-38S-23E
San Juan County, Utah
Federal Lease No. U-20895

Gentlemen:

Enclosed are three copies of Form 3160-3, Application for Permit to Drill with attachments for the above referenced location.

Please be advised that Meridian Oil Inc. requests that all pertinent data for this location be granted TIGHT HOLE status.

If you have any questions, please do not hesitate to call me at 406-256-4122.

Sincerely,



S. S. Nelson
Sr. Operations Technician

ssn

Enc1

1175N

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. TYPE OF WORK

DRILL ☒

DEEPEN ☐

PLUG BACK ☐

b. TYPE OF WELL

OIL
WELL ☒

GAS
WELL ☐

OTHER

SINGLE
ZONE ☒

MULTIPLE
ZONE ☐

2. NAME OF OPERATOR

MERIDIAN OIL INC.

3. ADDRESS OF OPERATOR

P. O. Box 1855, Billings, MT 59103

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)*

At surface

SENE (1970' FNL - 461' FEL)

At proposed prod. zone

Same

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*

5 miles northwest of Hatch Trading Post

15. DISTANCE FROM PROPOSED*

LOCATION TO NEAREST
PROPERTY OR LEASE LINE, FT.
(Also to nearest drlg. unit line, if any)

461'

16. NO. OF ACRES IN LEASE

1280.00

17. NO. OF ACRES ASSIGNED
TO THIS WELL

40

18. DISTANCE FROM PROPOSED LOCATION*
TO NEAREST WELL, DRILLING, COMPLETED,
OR APPLIED FOR, ON THIS LEASE, FT.

800'

19. PROPOSED DEPTH

6,104'

20. ROTARY OR CABLE TOOLS

Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.)

5113' GL (graded)

22. APPROX. DATE WORK WILL START*

1st Quarter, 1987

23.

PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
17-1/2	13-3/8	48#	80'	Redi-Mix to surface
11	8-5/8	24#	1,900'	Single stage. Cmt to sfc w/360 sx "B" +3% salt+16% gel+.2% rtrdr & 110 sx "B"+2% CaCl ₂
7-7/8	5-1/2	15.5#	6,104'	Single stage. TOC @ 1500'. Cal log + 20% excess. "B" + 16% gel +3% salt+.4% rtrdr & "B" + 3% Kcl + .8% fluid loss.

Oil and Gas Order #1

Attachments:

Survey Plat

Eight Point Drilling Program

Thirteen Point Surface Use Plan

RECEIVED
DEC 04 1986

DIVISION OF
OIL, GAS & MINING

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen or plug back, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

SIGNED [Signature] TITLE Sr. Drilling Engineer DATE 12/1/86

(This space for Federal or State office use)

PERMIT NO.

43-037-31298

APPROVAL DATE

APPROVED BY THE STATE
OF UTAH DIVISION OF
OIL, GAS, AND MINING

APPROVED BY

TITLE

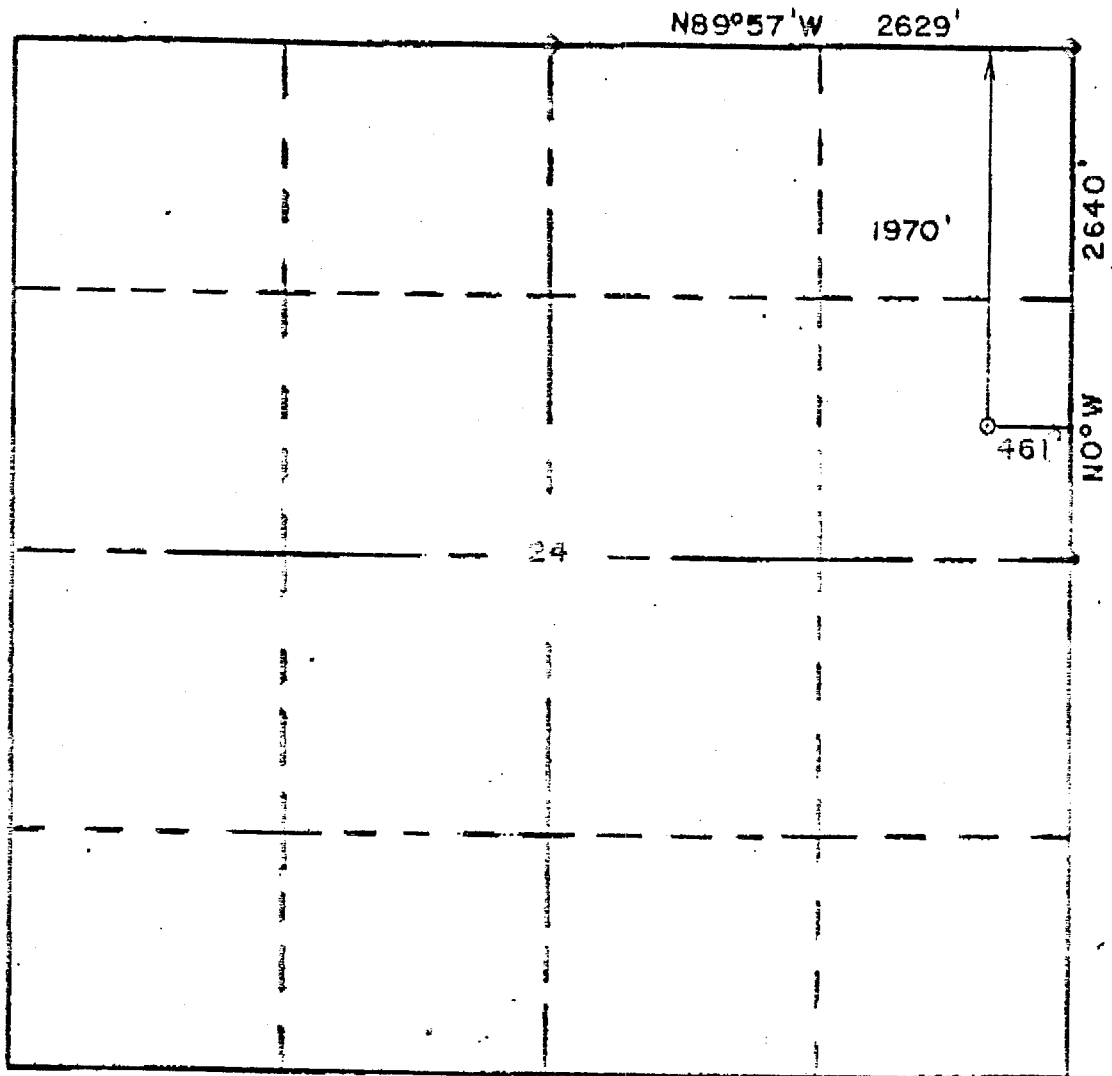
DATE: 12-16-86

BY: John R. Baya

WELL SPACING: 302

*See Instructions On Reverse Side

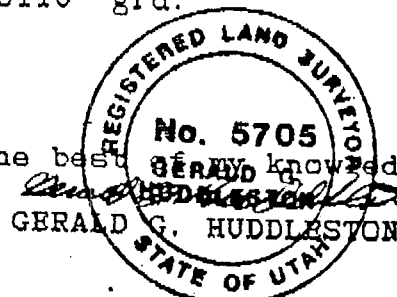
WELL LOCATION PLAT



WELL LOCATION DESCRIPTION:

Meridian Oil 42-24 Havasu Federal,
 1970' FNL & 461' FEL
 Section 24, T.38 S., R.23 E., SLM
 San Juan County, Utah
 5114' ground elevation
 Reference: N53 E, 500' 5110' grd.
 6 Nov. 1986

The above is true to the best of my knowledge.



1370N

OIL AND GAS ORDER NO. 1

MERIDIAN OIL INC.

LEASE NAME: 42-24 Havasu-Federal
LEASE NO. U-20895
LOCATION: SENE Section 24-38S-23E
1970' FNL - 461' FEL
San Juan County, Utah
Havasus Prospect

A. EIGHT POINT DRILLING PROGRAM

1. & 2. Estimated Tops:

Morrison	Surface	
Entrada	750	
Navajo	938	fresh water
Chinle	1880	
Shinarump	2870	
Cutler	2990	
Hermosa	4744	
Upper Ismay	5684	oil
Top Porosity	5708	
A Shale	5815	
Lower Ismay	5844	
Desert Creek	5934	oil
Chimney Rock	6015	
Akah	6038	
TD	6104	

3. Pressure Control Equipment:

- a. A 3000 psi WP wellhead will be installed on the surface casing. A 3000 psi WP Annular preventer and 3000 psi WP double gate preventer equipped with blind and pipe rams will be nipped up on wellhead.
- b. BOP systems will be consistent with API RP 53. Annular preventer will be tested to 1500 psi against casing. Pipe and blind rams, choke line and manifold will be tested to 2000 psi against casing. Casing will be tested to 2000 psi prior to drilling float shoe. Pressure tests will be conducted before drilling out from under all casing strings which are set and cemented in place. Blowout preventor controls will be installed prior to drilling the surface casing plug and will remain in use until the well is completed or abandoned. Preventers will be inspected and operated at least daily to ensure good mechanical working order, and this inspection recorded on the daily drilling report. Preventers will be pressure tested before drilling casing cement plugs.

4. Casing program:

Anticipated cement tops will be reported as to depth, not the expected number of sacks. The San Juan Resource Area will be notified 1 day before running casing strings and cement.

O&G Order No. 1
42-24 Havasu-Federal
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Hole Size	Size	Depth	Casing			Cond	Cementing Program
			Weight	Grade	Thrd		
17-1/2	13-3/8	80	48#	H-40	ST&C	New	Redi-Mix to surface.
11	8-5/8	1,900	24#	K-55	ST&C	New	Single stage. Cement to sfc w/360 sx "B" + 3% salt + 16% gel + .2% retarder & 110 sx "B" + 2% CaCl ₂ .
7-7/8	5-1/2	6,104	15.5#	K-55	LT&C	New	Single stage. TOC @ 1500'. Caliper log + 20% excess. "B" + 16% gel + 3% salt + .4% retarder & "B" + 3% Kcl + .8% fluid loss.

5. Proposed drilling mud program:

A water base mud system from surface to TD. Maximum anticipated mud weight is 9.3#/gallon.

A mud logging unit will be on location from 3300' to TD.

6. Testing program:

Upper Ismay - Probable
Desert Creek - Possible

Logging program:

GR/DLL/MSFL Base surface casing to TD (GR to surface)
GR/CNL/FDC Base surface casing to TD
GR/Sonic Base surface casing to TD (GR to surface display)
Directional Survey Base surface casing to TD
Dipmeter: If Desert Creek indicates productive.

Coring program:

None planned.

Whether the well is completed as a dry hole or as a producer, "Well Completion and Recompletion Report and Log" (Form 3160-4) will be submitted not later than 30 days after completion of the well or after completion of operations being performed, in accordance with 43 CFR 3164. Two copies of all logs, core descriptions, core analysis, well-test data, geologic summaries, sample description, and all other surveys or data obtained and compiled during the drilling, workover, and/or completion operations, will be filed with Form 3160-4. If requested, samples (cuttings, fluids, and/or gases) will be submitted to the District Manager.

7. Anticipated abnormal BHP or BHT:

No abnormal BHP or BHT are expected in this well.

Potentially hazardous conditions anticipated:

No H₂S has been found, reported or is known to exist at these depths in this area.

8. Anticipated Starting Dates and Notifications of Operations

The operator will contact the San Juan Resource Area at 801-587-2141, 48 hours before beginning any dirt work.

No location will be constructed or moved, no well will be plugged, and no drilling or workover equipment will be removed from a well to be placed in a suspended status without prior approval of the District Manager. If operations are to be suspended, prior approval of the District Manager will be obtained and notification given before resumption of operations.

The spud date will be reported orally to the San Juan Area Manager, a minimum of 24 hours before spudding. A Sundry Notice (Form 3160-5) will be sent within 24 hours after spudding, reporting the spud date and time. The Sundry will be sent to the District Manager. If the spudding is on a weekend or holiday, the Sundry will be submitted on the following regular work day.

In accordance with Onshore Oil and Gas Order No. 1, this well will be reported on Form 9-329 "Monthly Report of Operations," starting with the month in which operations begin and continue each month until the well is physically plugged and abandoned. This report will be sent to the BLM District Office, P. O. Box 970, Moab, Utah 84532.

Immediate Report: Spills, blowouts, fires, leaks, accidents, or any other unusual occurrences shall be promptly reported to the Resource Area in accordance with requirements of NTL-3A.

If a replacement rig is planned for completion operations, a Sundry Notice (Form 3160-5) to that effect will be filed, for prior approval of the District Manager. All conditions of this approved plan are applicable during all operations conducted with the replacement rig. In emergencies, verbal approval can be given by the District Petroleum Engineer.

If the well is successfully completed for production, then the District Manager will be notified when the well is placed in a producing status. Such notification will be sent by telegram or other written communication, not later than 5 business days following the date on which the well is placed on production.

No well abandonment operations will begin without the prior approval of the District Manager. In the case of newly drilled dry holes or failures, and in emergencies, oral approval will be obtained from the District Petroleum Engineer. A "Subsequent Report of Abandonment" (Form 3160-5), will be filed with the District Manager, within 30 days following completion of the well for abandonment. This report will indicate where plugs were placed and the current status of surface restoration.

Final abandonment will not be approved until the surface reclamation work required by the approved APD or approved abandonment notice has been completed to the satisfaction of the San Juan Area Manager, or the appropriate surface manager.

Approval to vent/flare gas during initial well evaluation will be obtained from the District Office. This preliminary approval will not exceed 30 days or 50 MMCF gas. Approval to vent/flare beyond this initial test period will require District Office approval pursuant to guidelines in NTL-4A.

Upon completion of approved plugging, a regulation marker will be erected in accordance with 43 CFR 3162.6. The following information will be permanently beaded-on with a welding torch: Fed, well number, location by 1/4 1/4 section, township and range, Lease number.

A first production conference will be scheduled within 15 days after receipt of the first production notice. The San Juan Area Manager will schedule the conference.

Other: A separate rig will be used for completion operations.

The following may be inspected and/or witnessed:

1. The cementing and testing of surface casing.
2. (Dry Hole) Setting and testing of surface casing shoe plug.
3. (Depleted Producer) The setting and testing of plugs across the producing horizon and if applicable, the surface casing shoe plug and/or annulus (casing to formation) squeeze jobs.

Notify the San Juan Resource Area (Mike Wade) one day or on dry hole as soon as possible prior to the above at (801) 587-2141 (Home) (801) 587-2026 or if unable to reach Mike, call Moab District office Greg Noble at (801) 259-6111 (Home) (801) 259-8811.

B. THIRTEEN POINT SURFACE USE PLAN

1. Existing Roads (Yellow)

- a. Location of proposed well in relation to town or other reference point:
5 miles northwest of Hatch Trading Post.
- b. Proposed route to location. (See attached Exhibit "1").
- c. Existing and new access shall be maintained in good or better condition.
- d. An encroachment permit will be obtained from the San Juan County Road Department.

2. Planned Access Roads (Blue)

- a. The maximum total width will be 30 feet for 1/4 miles.
- b. Maximum grade is N/A.
- c. There will be turnouts as needed.
- d. Road is centerline flagged.
- e. 1 - 24" culvert will be required.
- f. If well is drilled during wet winter conditions, surface materials may be required to avoid maintenance problems.
- g. Road starts at 41-24 location.

Surface disturbance and vehicular travel will be limited to the approved location and approved access route. Any additional area needed will be approved in advance by the San Juan Area Manager.

The access road will be water barred or brought to Class III Road Standards within 60 days of dismantling of the drill rig. If this time frame cannot be met, the San Juan Area Manager will be notified so that temporary drainage control can be installed along the access road.

The Class III Road Standards which ensure drainage control over the entire road through the use of natural, rolling topography; ditch turnouts; drainage dips; outsloping; crowning; low water crossing; and culverts will be determined at the appropriate field inspection.

3. Location of Existing Wells (1 mile radius)

- a. Existing wells in the area are shown on attached Exhibit "1".

4. Location of Existing and/or Proposed Facilities if Well is Productive

Battery facility will be combined with 41-24 Havasu-Federal Tank Battery, located in the NENE Section 24. A Sundry Notice will be filed before the production facilities are built.

All permanent (on site for 6 months or longer) above ground facilities (including pump jacks) will be painted a flat, nonreflective, earthtone color to match the standard environmental colors, as determined by the Rocky Mountain 5-State Interagency Committee. All facilities will be painted within 6 months of installation. Facilities required to comply with the Occupational Safety and Health Act (OSHA) will be excluded. The color will be Desert Brown.

All flowlines will be buried parallel to existing roads unless authorized otherwise by BLM.

If a tank battery is constructed on this lease, it will be surrounded by a dike of sufficient capacity to contain 1-1/2 times the storage capacity of the battery.

All loading lines will be placed inside the berm surrounding the tank battery.

All site security guidelines identified in 43 CFR 3162.7 regulations will be adhered to. All product lines entering and leaving hydrocarbon storage tanks will be effectively sealed.

All off-lease storage, off-lease measurement, or commingling on-lease or off-lease will have prior written approval from the District Manager.

Gas meter runs for each well will be located within 500 feet of the wellhead. The gas flowline will be buried from the wellhead to the meter and 500 feet downstream of the meter run or any production facilities. Meter runs will be housed and/or fenced.

The oil and gas measurement facilities will be installed on the well location. The oil and gas meters will be calibrated in place before any deliveries. Tests for meter accuracy will be conducted monthly for the first 3 months on new meter installations and at least quarterly thereafter. The San Juan Area Manager will be provided with a date and time for the initial meter calibration and all future meter proving schedules. A copy of the meter calibration reports will be submitted to the San Juan Area Manager. All meter measurement facilities will conform with the API standards for liquid hydrocarbons and the AGA standard for natural gas measurement.

5. Location and Type of Water Supply

All water needed for drilling purposes will be hauled by Hay Hot Oil Service, a commercial water hauler, from a private source.

Use of water for this operation will be approved by obtaining a temporary use permit from the Utah State Engineer, (801) 637-1303 and by receiving permission from the landowner or surface management agency to use the land containing the water source.

6. Source of Construction Materials

Native soil materials from drilling location and access trail, which is available, will be used. Any additional materials needed will be hauled in from authorized commercial sources.

The use of materials under BLM jurisdiction will conform to 43 CFR 3610.2-3.

7. Methods for Handling Waste Disposal

The reserve pit will be lined with commercial bentonite or native clay sufficient to prevent seepage. At least half of the capacity will be in cut.

Three sides of the reserve pit will be fenced with four strands of barbed wire before drilling starts. The fourth side will be fenced as soon as the drilling is completed. The fence will be kept in good repair while the pit is drying.

A trash pit will be constructed near the mud tanks and dug at least six feet into solid undisturbed material. It will be totally enclosed with a fine wire mesh before the rig moves in. The road and pad will be kept litter free.

A burning permit is required for burning trash between May 1 and October 31. This can be acquired by contacting the San Juan County Sheriff's office.

Produced waste water will be confined to a (lined/unlined) pit for a period not to exceed 90 days after initial production. During the 90 day period, an application for approval of a permanent disposal method and location, along with the required water analysis, will be submitted for the District Manager's approval pursuant to Onshore Oil and Gas Order No. 3 (NTL-2B).

8. Ancillary Facilities

Camp facilities will not be required.

9. Well Site Layout

Rig layout is shown on attached Exhibit "9a".

Cuts and fills are shown on attached Exhibit "9b".

The top 0 inches of soil material will be removed from the location. Topsoil along the access will be reserved in place.

Access to the well pad will be from the west.

10. Reclamation:

- a. Immediately on completion of drilling, all trash and debris will be collected from the location and surrounding area. All trash and debris will be disposed of in the trash pit and will then be compacted and buried under a minimum of two feet of compacted soil.
- b. The operator/holder or his contractor will contact the San Juan Resource Area office in Monticello, Utah, (801) 587-2141, 48 hours before starting reclamation work that involves earthmoving equipment and upon completion of restoration measures.
- c. Before any dirt work to restore the location takes place, the reserve pit must be completely dry.
- d. All disturbed areas will be recontoured to blend as nearly as possible with the natural topography. This includes removing all berms and refilling all cuts.
- e. The stockpiled topsoil will be spread evenly over the disturbed area. All disturbed areas will be ripped 12 inches deep with the contour.

- f. Water bars will be built as follows to control erosion.

<u>Grade</u>	<u>Spacing</u>
2%	Every 200 feet
2-4%	Every 100 feet
4-5%	Every 75 feet
5+%	Every 50 feet

- g. Seed will be broadcast between October 1 and February 28 with the following prescription. A harrow or similar implement will be dragged over the area to assure seed cover.

<u>3</u>	lbs/acre Galleta (<u>Hilaria jamesii</u>)
<u>2</u>	lbs/acre Fourwing saltbush (<u>Atriplex canescens</u>)
<u>2</u>	lbs/acre Shadscale (<u>Atriplex confertifolia</u>)
<u>1/2</u>	lbs/acre Yellow Sweet clover

- h. After seeding is complete, the stockpiled trees will be scattered evenly over the disturbed areas. The access will be blocked to prevent vehicular access.
- i. The reserve pit and that portion of the location and access road not needed for production or production facilities will be reclaimed as described in the reclamation section. Enough topsoil will be kept to reclaim the remainder of the location at a future date. This remaining stockpile of topsoil will be seeded in place using the prescribed seed mixture.

11. Surface Ownership: Federal
Mineral Ownership: Federal

12. Other Information

There will be no change from the proposed drilling and/or workover program without prior approval from the District Manager. Safe drilling and operating practices must be used. All wells, whether drilling, producing, suspended, or abandoned will be identified in accordance with 43 CFR 3162.2.

"Sundry Notice and Report on Wells" (Form 3160-5) will be filed for approval for all changes of plans and other operations in accordance with 43 CFR 3164.

The dirt contractor will be provided with an approved copy of the surface use plan.

If subsurface cultural materials are exposed during construction, work in that spot will stop immediately and the San Juan Resource Area Office will be contacted. All people who are in the area will be informed by the operator/holder that they are subject to prosecution for disturbing archaeological sites or picking up artifacts. Salvage or excavation of identified archaeological sites will be done by a BLM approved archaeologist only if damage occurs.

This permit will be valid for a period of one year from the date of approval. After permit termination a new application will be filed for approval for any future operations.

Your contact with the District Office is: Greg Noble
Office Phone: 801-259-6111 Address: P. O. Box 970, Moab, UT 84532

Resource Area Manager's Address and contacts:
Address: P. O. Box 7, Monticello, UT 84535

Your contact is: Rich McClure
Office Phone: 801-587-2141

13. Lessee or Operator's Field Representative and Certification

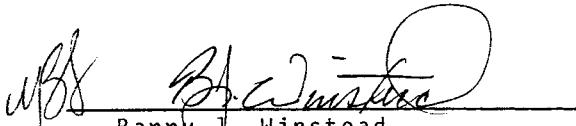
Meridian Oil Inc.
P. O. Box 1855
Billings, Montana 59103

1.	Johnny L. Wright, Drilling Supt.	406-256-4175	406-252-2889
2.	Bill Lloyd, Drilling Engineer	406-256-4129	406-252-2328
3.	John Pulley, Completion Supt	406-256-4124	406-259-6156
4.	Barry Winstead, Sr. Drilling Engineer	406-256-4030	406-656-7521

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42-24 Havasu-Federal
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CERTIFICATION:

I hereby certify that I, or persons under my direct supervision, have inspected the proposed drillsite and access route; that I am familiar with the conditions which presently exist; that the statements made in this plan are, to the best of my knowledge, true and correct, and, that the work associated with the operations proposed herein will be performed by Meridian Oil Inc. and its contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved. This statement is subject to the provisions of 18 U.S.C. 1001 for the filing of a false statement.

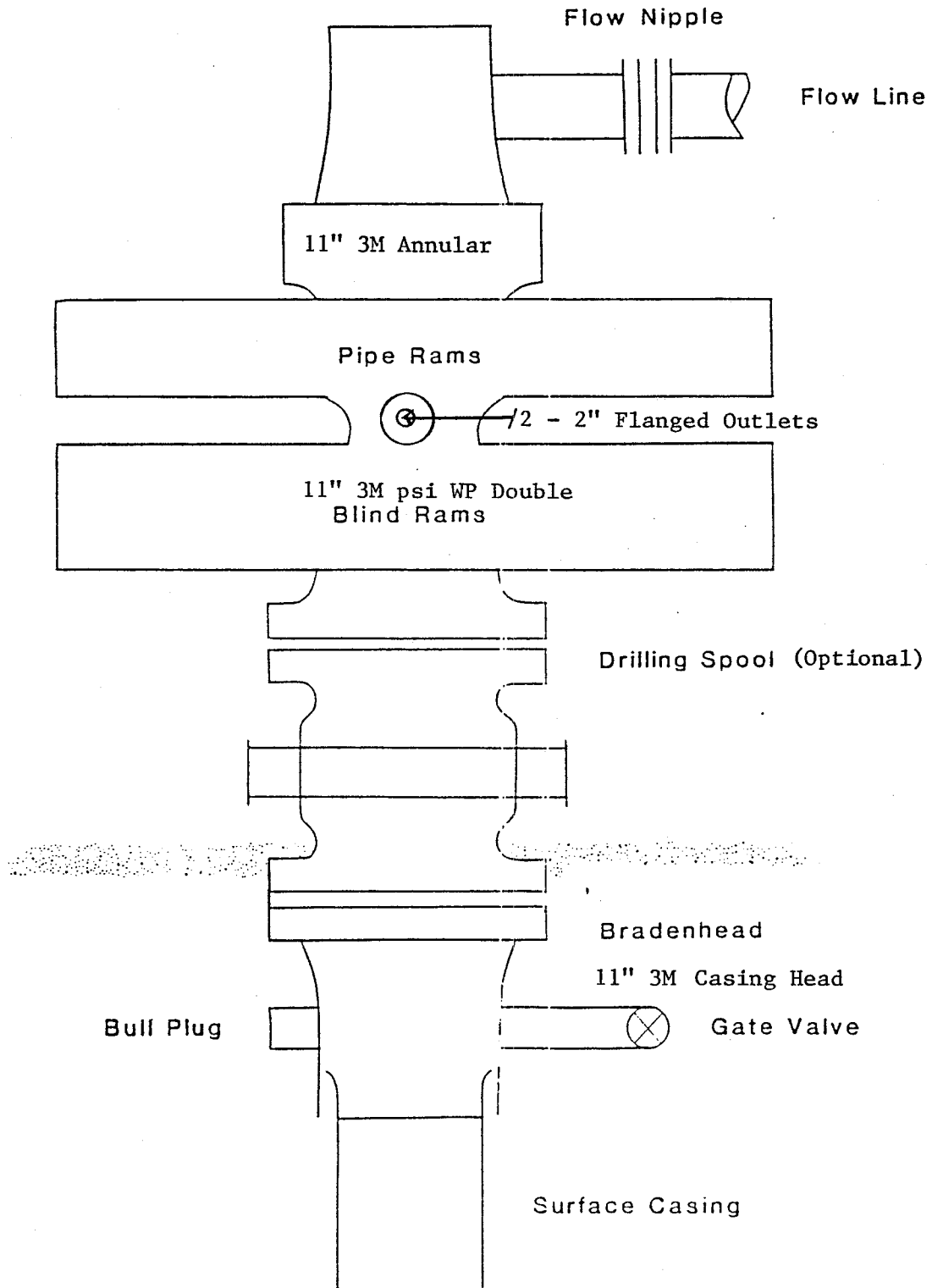

Barry J. Winstead
Sr. Drilling Engineer

12/1/86
Date

ssn

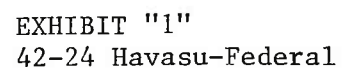
1000000-1000000

TYPICAL B.O.P. INSTALLATION



Series 900 Double Gate B.O.P.,
rated at 3000 psi Working Pressure.

When gas drilling operations begin a Shaffer type 50 or equivalent rotating head is installed on top of the flow nipple and the flow line is converted into a blowie line.



42-24

N

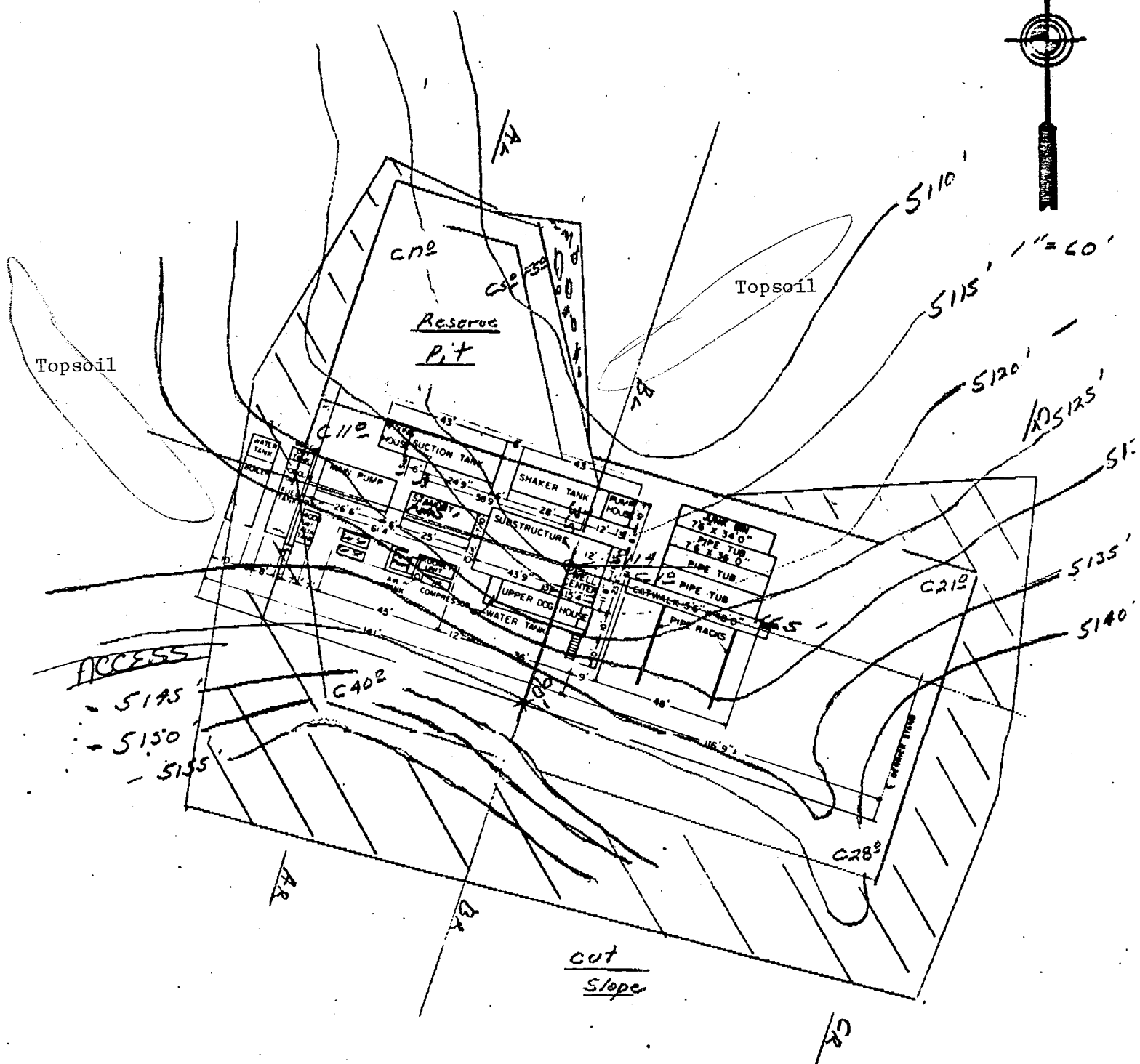



EXHIBIT "9a"
Rig Layout

WELL PAD CROSS-SECTION

42-24

Cut /////
Fill 

Scales: 1" = 60' H.
1" = 30' V.

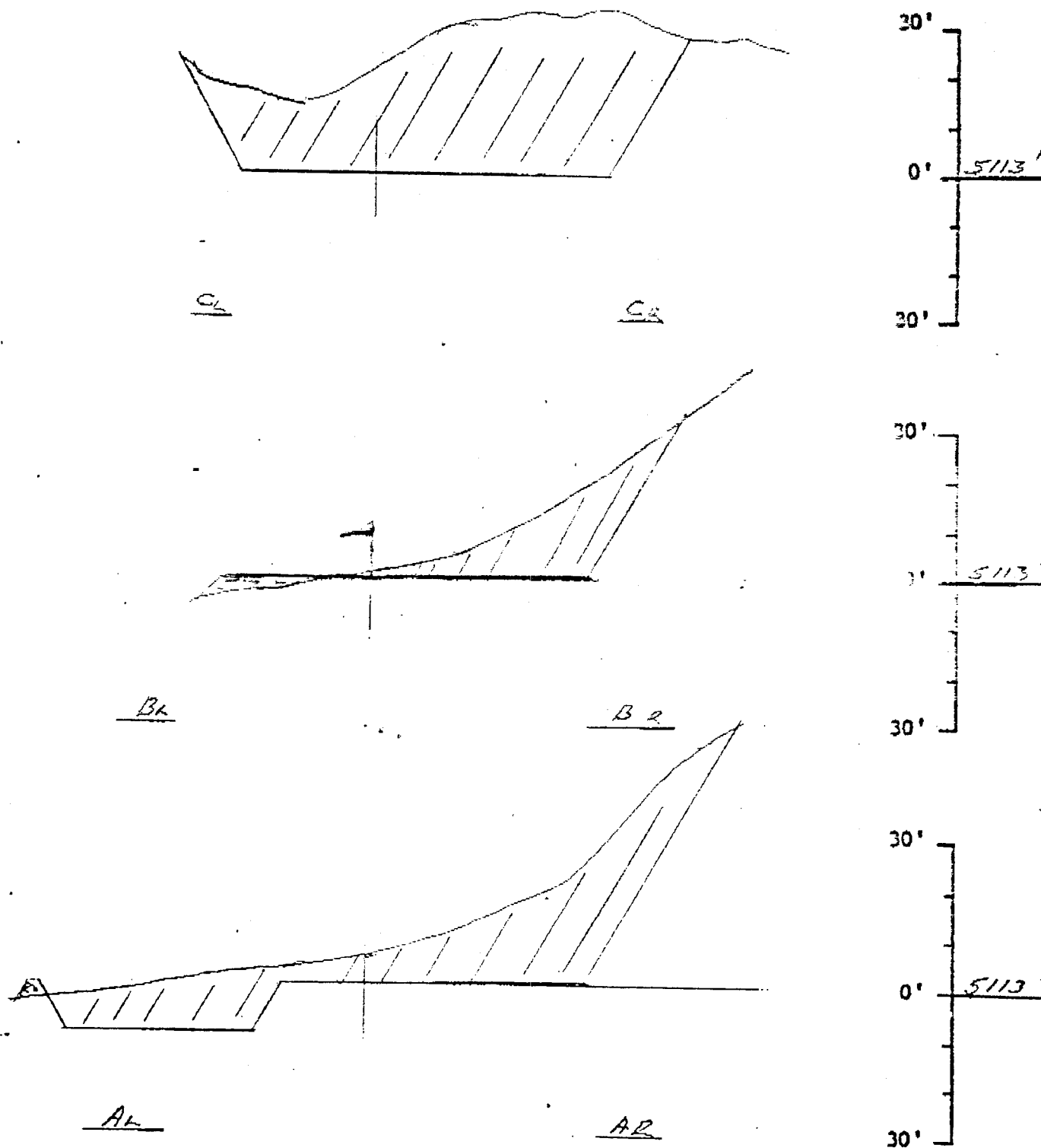


EXHIBIT "9b"
Cross-Sections

~~CONFIDENTIAL~~

121808

121717

OPERATOR Meridian Oil, Inc DATE 12-8-86

WELL NAME Havren Fed. 42-24

SEC SENE 24 T 38S R 23E COUNTY San Juan

43-037-31298
API NUMBER

Lease
TYPE OF LEASE

CHECK OFF:

☒

PLAT

☒

BOND

☒

NEAREST
WELL

☒

LEASE

☒

FIELD

☒

POTASH OR
OIL SHALE

PROCESSING COMMENTS:

No other well within 920'

Need water permit

APPROVAL LETTER:

SPACING: ☐ 203 _____ UNIT

☒

302

☐

CAUSE NO. & DATE

☐

302.1

STIPULATIONS:

1- water



STATE OF UTAH
NATURAL RESOURCES
Oil, Gas & Mining

Norman H. Bangerter, Governor
Dee C. Hansen, Executive Director
Dianne R. Nielson, Ph.D., Division Director

355 W. North Temple • 3 Triad Center • Suite 350 • Salt Lake City, UT 84180-1203 • 801-538-5340

December 16, 1986

Meridian Oil, Inc.
P. O. Box 1855
Billings, Montana 59103

Gentlemen:

Re: Havasu Federal 42-24 - SE NE Sec. 24, T. 38S, R. 23E
1970' FNL, 461' FEL - San Juan County, Utah

Approval to drill the referenced well is hereby granted in accordance with Rule 302, Oil and Gas Conservation General Rules, subject to the following stipulations:

1. Prior to commencement of drilling, receipt by the Division of evidence providing assurance of an adequate and approved supply of water as required by Chapter 3, Title 73, Utah Code Annotated.

In addition, the following actions are necessary to fully comply with this approval:

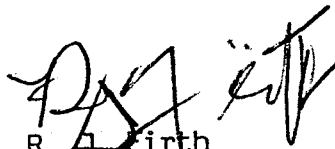
1. Spudding notification to the Division within 24 hours after drilling operations commence.
2. Submittal to the Division of completed Form OGC-8-X, Report of Water Encountered During Drilling.
3. Prompt notification to the Division should you determine that it is necessary to plug and abandon this well. Notify John R. Baza, Petroleum Engineer, (Office) (801) 538-5340, (Home) 298-7695, or R. J. Firth, Associate Director, (Home) 571-6068.
4. Compliance with the requirements and regulations of Rule 311.3, Associated Gas Flaring, Oil and Gas Conservation General Rules.

Page 2
Meridian Oil, Inc.
Havasut Federal 42-24
December 16, 1986

5. Prior to commencement of the proposed drilling operations, plans for toilet facilities and the disposal of sanitary waste at the drill site shall be submitted to the local health department having jurisdiction. Any such drilling operations and any subsequent well operations must be conducted in accordance with applicable State and local health department regulations. A list of all local health departments and copies of applicable regulations are available from the Division of Environmental Health, Bureau of General Sanitation, telephone (801) 533-6163.
6. This approval shall expire one (1) year after date of issuance unless substantial and continuous operation is underway or an application for an extension is made prior to the approval expiration date.

The API number assigned to this well is 43-037-31298.

Sincerely,



R. J. Firth

Associate Director, Oil & Gas

as

Enclosures

cc: Branch of Fluid Minerals

D. R. Nielson

8150T

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. TYPE OF WORK DRILL <input checked="" type="checkbox"/> DEEPEN <input type="checkbox"/> PLUG BACK <input type="checkbox"/>			5. LEASE DESIGNATION AND SERIAL NO. U-56186		
b. TYPE OF WELL OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <input type="checkbox"/>			6. IF INDIAN, ALLOTTEE OR TRIBE NAME N/A		
2. NAME OF OPERATOR MERIDIAN OIL INC.			7. UNIT AGREEMENT NAME N/A		
3. ADDRESS OF OPERATOR P. O. Box 1855, Billings, MT 59103			8. FARM OR LEASE NAME Havasu-Federal		
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)* At surface SWNW (2180' FNL - 461' FWL) At proposed prod. zone Same			9. WELL NO. 12-19		
14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE* 5 miles northwest of Hatch Trading Post			10. FIELD AND POOL, OR WILDCAT Havasu		
15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drig. unit line, if any) 461'		16. NO. OF ACRES IN LEASE 3427.68	17. NO. OF ACRES ASSIGNED TO THIS WELL 40		
18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT. 1000'		19. PROPOSED DEPTH 6084'	20. ROTARY OR CABLE TOOLS Rotary		
21. ELEVATIONS (Show whether DF, RT, GR, etc.) 5089' GL (graded)			22. APPROX. DATE WORK WILL START* 1st Quarter, 1987		
23. PROPOSED CASING AND CEMENTING PROGRAM					

RECEIVED
DEC 17 1986

DIVISION OF
OIL, GAS & MINING

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen or plug back, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

SIGNED B. J. C. [Signature] TITLE Sr. Drilling Engineer DATE 11/25/86

(This space for Federal or State office use)

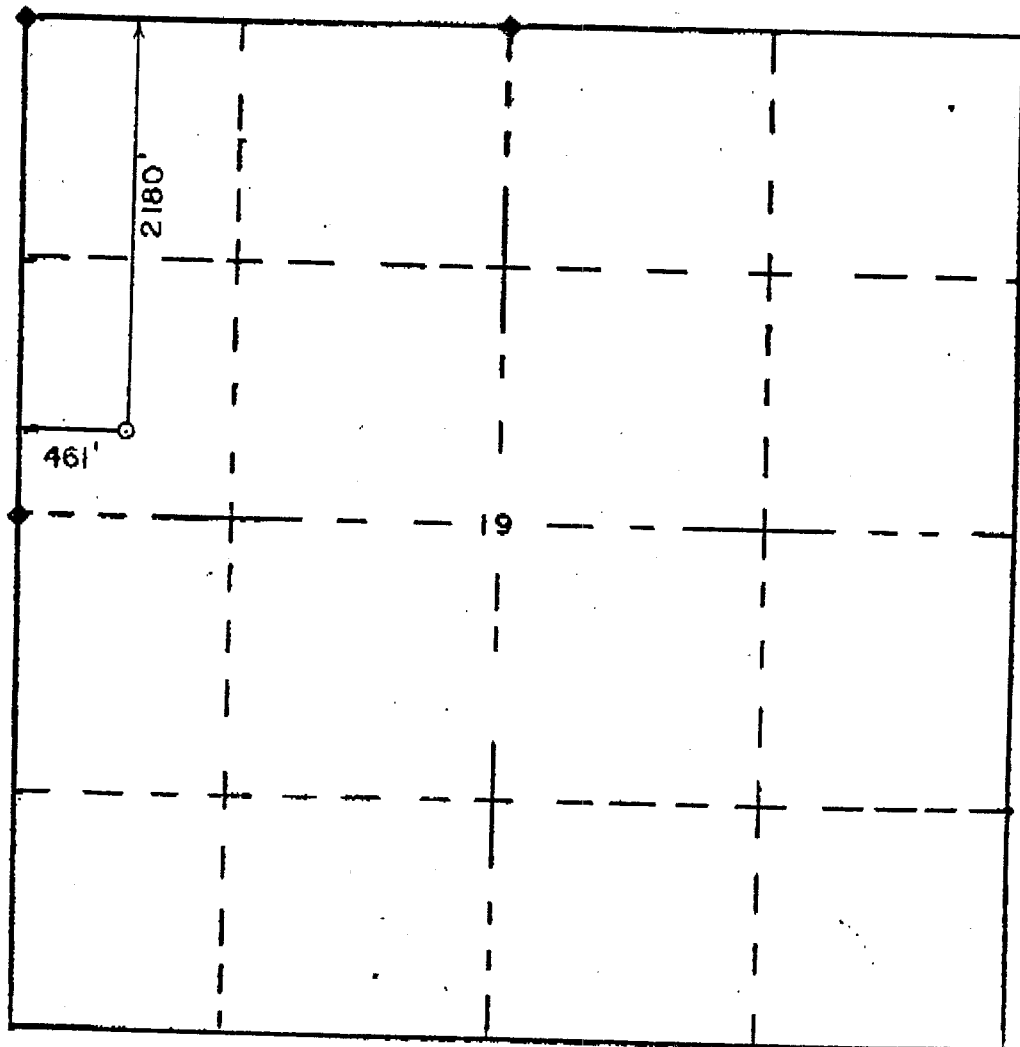
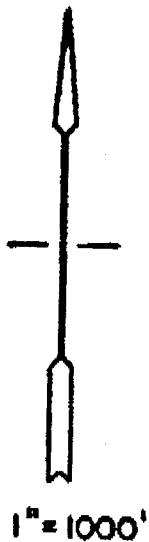
PERMIT NO. 151 GENE NODINE APPROVAL DATE DEC 15 1986
APPROVED BY DISTRICT MANAGER TITLE DISTRICT MANAGER DATE DEC 15 1986
CONDITIONS OF APPROVAL, IF ANY:

FLARING OR VENTING OF
GAS IS SUBJECT TO NTL 4-A
DATED 1/1/80

CONDITIONS OF APPROVAL ATTACHED

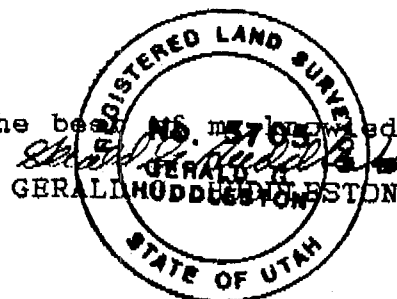
*See Instructions On Reverse Side

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the

**WELL LOCATION DESCRIPTION:**

Meridian Oil 12-19 Havasu Federal
2180' FNL & 461' FWL
Section 19, T.38 S., R.24 E., SLM
San Juan County, Utah
5090' ground elevation
Reference: N46° W 729.07', 5110' grd.
6 Nov. 1986

The above is true to the best of my knowledge.



Meridian Oil Inc.
Well No. Havasu-Federal 12-19
Sec. 19, T. 38 S., R. 24 E.
San Juan County, Utah
Lease U-56186

CONDITIONS OF APPROVAL

Approval of this application does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Meridian Oil Inc., is the bonded entity as designated operator on this application. If any assignments or designations change, liability will remain with Meridian Oil Inc., until we are formally notified by letter of the new bonded entity in reference to this Application for Permit to Drill.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. TYPE OF WORK

DRILL ☒

DEEPEN ☐

PLUG BACK ☐

b. TYPE OF WELL

OIL
WELL ☒

GAS
WELL ☐

OTHER

SINGLE
ZONE ☒

MULTIPLE
ZONE ☐

2. NAME OF OPERATOR

MERIDIAN OIL INC.

3. ADDRESS OF OPERATOR

P. O. Box 1855, Billings, MT 59103

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*)

At surface

SENE (1970' FNL - 461' FEL)

At proposed prod. zone

Same

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*

5 miles northwest of Hatch Trading Post

15. DISTANCE FROM PROPOSED*

LOCATION TO NEAREST
PROPERTY OR LEASE LINE, FT.
(Also to nearest drig. unit line, if any)

461'

18. DISTANCE FROM PROPOSED LOCATION*
TO NEAREST WELL, DRILLING, COMPLETED,
OR APPLIED FOR, ON THIS LEASE, FT.

800'

16. NO. OF ACRES IN LEASE

1280.00

19. PROPOSED DEPTH

6,104'

17. NO. OF ACRES ASSIGNED
TO THIS WELL

40

20. ROTARY OR CABLE TOOLS

Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.)

5113' GL (graded)

22. APPROX. DATE WORK WILL START*

1st Quarter, 1987

23.

PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
17-1/2	13-3/8	48#	80'	Redi-Mix to surface
11	8-5/8	24#	1,900'	Single stage. Cmt to sfc w/360

RECEIVED
DEC 18 1986

DIVISION OF
OIL, GAS & MINING

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen or plug back, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

24.

SIGNED [Signature] TITLE Sr. Drilling Engineer DATE 12/1/86

(This space for Federal or State office use)

PERMIT NO.

APPROVAL DATE

Kenneth V. Rhea

Acting

DISTRICT MANAGER

DEC 16 1986

APPROVED BY

TITLE

DATE

CONDITIONS OF APPROVAL, IF ANY:

FLARING OR VENTING OF GAS IS SUBJECT OF NTL 4-A
CONDITIONS OF APPROVAL ATTACHED

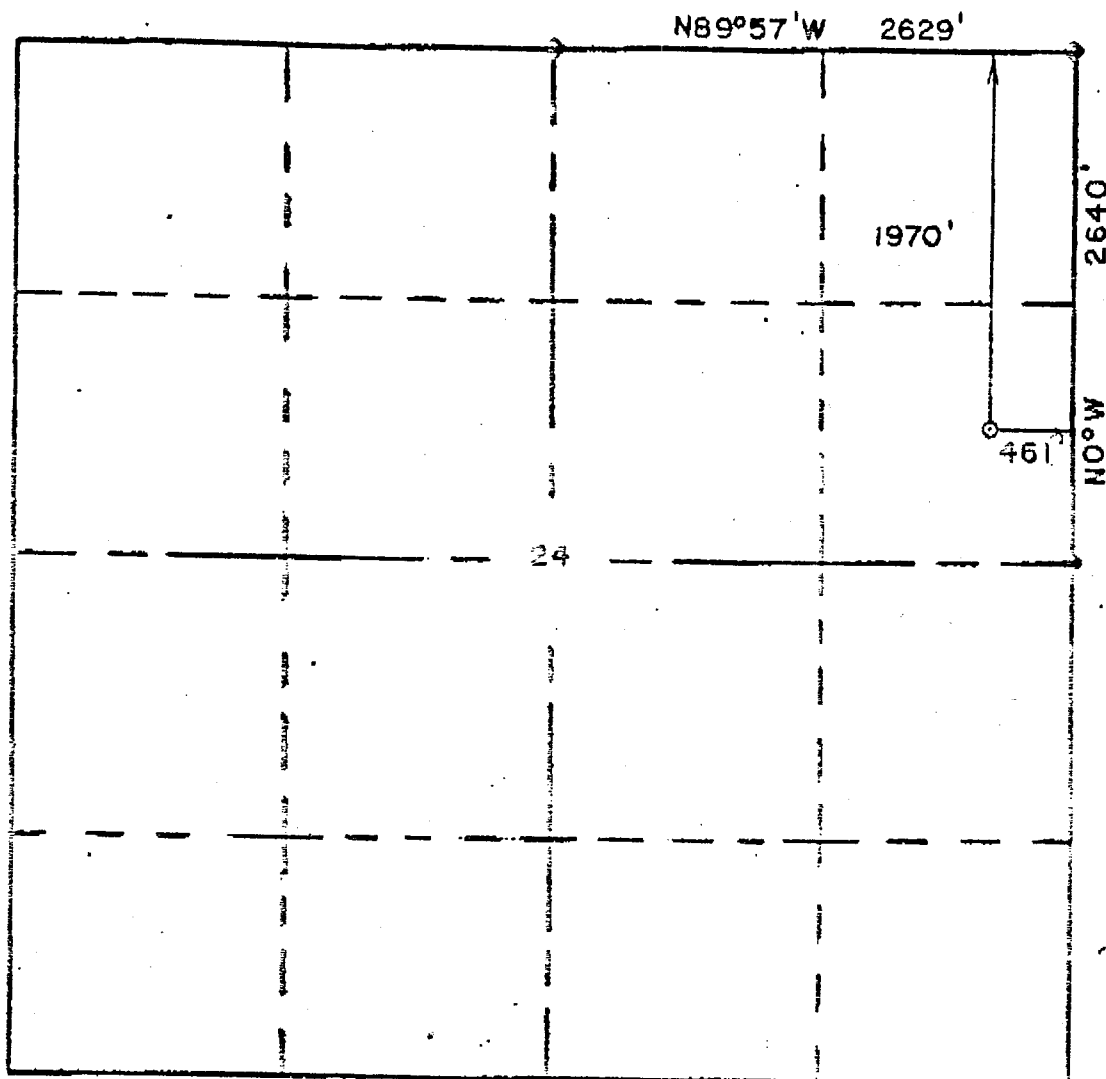
DATED 1/1/80

*See Instructions On Reverse Side

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

State of Utah - DGM

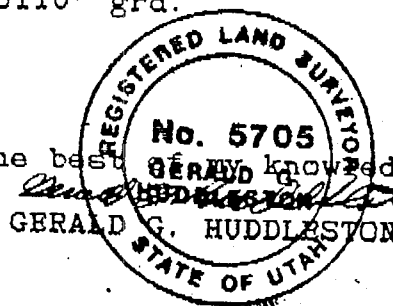
WELL LOCATION PLAT



WELL LOCATION DESCRIPTION:

Meridian Oil 42-24 Havasu Federal
 1970' FNL & 461' FEL
 Section 24, T.38 S., R.23 E., SLM
 San Juan County, Utah
 5114' ground elevation
 Reference: N53 E, 500' 5110' grd.
 6 Nov. 1986

The above is true to the best of my knowledge.



Meridian Oil Inc.
Well No. Havasu-Federal 42-24
Sec. 24, T. 38 S., R. 23 E.
San Juan County, Utah
Lease U-20895

CONDITIONS OF APPROVAL

Approval of this application does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

012107

DIVISION OF OIL, GAS AND MINING

~~CONFIDENTIAL~~

SPODDING INFORMATION

API #43-037-31298

NAME OF COMPANY: MERIDIAN OIL COMPANY

WELL NAME: Havasu Federal 42-24

SECTION SE NE 24 TOWNSHIP 38S RANGE 23E COUNTY San Juan

DRILLING CONTRACTOR Aztec Drilling

RIG # 301

SPODDED: DATE 1-15-87

TIME 2:00 PM

HOW Rotary

DRILLING WILL COMMENCE

REPORTED BY Jimmy Reeder

TELEPHONE # 678-2228

DATE 1-15-87 SIGNED Wm. Moore

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN TRIPLICATE*
(Other instructions on reverse side)

Form approved.
Budget Bureau No. 1004-0135
Expires August 31, 1985

Utah

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir.
Use "APPLICATION FOR PERMIT—" for such proposals.)

1. OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <input type="checkbox"/>		5. LEASE DESIGNATION AND SERIAL NO. U-20895
2. NAME OF OPERATOR MERIDIAN OIL INC.		6. IF INDIAN, ALLOTTEE OR TRIBE NAME N/A
3. ADDRESS OF OPERATOR P. O. Box 1855, Billings, MT 59103		7. UNIT AGREEMENT NAME N/A
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements. See also space 17 below.) At surface SENE (1970' FNL - 461' FEL)		8. FARM OR LEASE NAME Havasu-Federal
14. PERMIT NO. 43-029-31298		9. WELL NO. 42-24
15. ELEVATIONS (Show whether DF, RT, GR, etc.) 5122' KB		10. FIELD AND POOL, OR WILDCAT Havasu
		11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA Section 24-38S-23E
		12. COUNTY OR PARISH San Juan
		13. STATE Utah

Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
TEST WATER SHUT-OFF <input type="checkbox"/>	PULL OR ALTER CASING <input type="checkbox"/>	WATER SHUT-OFF <input type="checkbox"/>	REPAIRING WELL <input type="checkbox"/>
FRACTURE TREAT <input type="checkbox"/>	MULTIPLE COMPLETE <input type="checkbox"/>	FRACTURE TREATMENT <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
SHOOT OR ACIDIZE <input type="checkbox"/>	ABANDON* <input type="checkbox"/>	SHOOTING OR ACIDIZING <input type="checkbox"/>	ABANDONMENT* <input type="checkbox"/>
REPAIR WELL <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>	(Other) <input type="checkbox"/> Spud Report	(Other) <input checked="" type="checkbox"/>
(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)			

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

Aztec, Rig #301, ✓ spudded well @ 2:00 PM 1-15-87. Ran 13-3/8" 61# K-55 casing, set @ 76' Pump 100 sx Class "B".

CONFIDENTIAL INFORMATION

18. I hereby certify that the foregoing is true and correct

SIGNED [Signature]

TITLE Sr. Operations Technician

DATE 1/16/87

(This space for Federal or State office use)

APPROVED BY _____
CONDITIONS OF APPROVAL, IF ANY:

TITLE _____

DATE _____

*See Instructions on Reverse Side

file Dull

FILING FOR WATER IN THE 021802 STATE OF UTAH

APPLICATION TO APPROPRIATE WATER

Rec. by SA #21637
Fee Paid \$ 15.00
Platted _____
Microfilmed _____
Roll # _____

For the purpose of acquiring the right to use a portion of the unappropriated water of the State of Utah, application is hereby made to the State Engineer, based upon the following showing of facts, submitted in accordance with the requirements of the Laws of Utah.

WATER USER CLAIM NO. 09 - 1498

APPLICATION NO. T62235

1. PRIORITY OF RIGHT: January 7, 1987

FILING DATE: January 7, 1987

2. OWNER INFORMATION

Name: Meridian Oil Inc.

Address: P.O. Box 1855, Billings, MT 59103

The land is not owned by the applicant(s), see explanatory.

3. QUANTITY OF WATER: 3.0 acre feet (Ac. Ft.)

4. SOURCE: Montezuma Creek & Underground Well DRAINAGE: San Juan River

POINT(S) OF DIVERSION:

COUNTY: San Juan

(1) N. 798 feet, E. 1876 feet, from the SW Corner of Section 28,
Township 38 S, Range 25 E, SLB&M

Description of Diverting Works: 1 inch diameter well.

(2) N. 250 feet, W. 1385 feet, from the SE Corner of Section 06,
Township 39 S, Range 25 E, SLB&M

Source: Montezuma Creek

Description of Diverting Works: Water Trucks

COMMON DESCRIPTION: 2 & 5 mi. NE Hatch Trading Post

5. NATURE AND PERIOD OF USE

Oil Exploration From January 15 to March 5.

RECEIVED
FEB 13 1987

6. PURPOSE AND EXTENT OF USE

Oil Exploration: Oil well drilling

DIVISION OF
OIL, GAS & MINING

7. PLACE OF USE

The water is used in all or parts of each of the following legal subdivisions.

TOWN	RANGE	SEC	North East Quarter				North West Quarter				South West Quarter				South East Quarter			
			NE $\frac{1}{4}$	NW $\frac{1}{4}$	SW $\frac{1}{4}$	SE $\frac{1}{4}$	NE $\frac{1}{4}$	NW $\frac{1}{4}$	SW $\frac{1}{4}$	SE $\frac{1}{4}$	NE $\frac{1}{4}$	NW $\frac{1}{4}$	SW $\frac{1}{4}$	SE $\frac{1}{4}$	NE $\frac{1}{4}$	NW $\frac{1}{4}$	SW $\frac{1}{4}$	SE $\frac{1}{4}$
38 S	23 E	24			X													

All locations in Salt Lake Base and Meridian

EXPLANATORY

This application is being filed to secure use of the water sources mentioned for the purpose of drilling the 42-24 Havasu-Federal well in Sec. 24, T38S, R23E, SLB&M. The point of diversion of the well is S. 1970 ft. & W. 461 ft. from NE Cor. Sec. 24, T38S, R23E, SLB&M. The water will be used in the well and mixed with well drilling fluid materials.

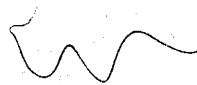
Appropriate

The applicant hereby acknowledges he/they are a citizen(s) of the
United States or intends to become such a citizen.

The quantity of water sought to be appropriated is limited to that which
can be beneficially used for the purpose herein described.

The undersigned hereby acknowledges that even though he/they may have been assisted in
the preparation of the above-numbered application through the courtesy of the employees
of the Division of Water Rights, all responsibility for the accuracy of the information
contained therein, at the time of filing, rests with the applicant(s).

Signature of Applicant

A handwritten signature, appearing to be a stylized 'W' or similar scribble, is written below the signature line.

STATE ENGINEER'S ENDORSEMENT

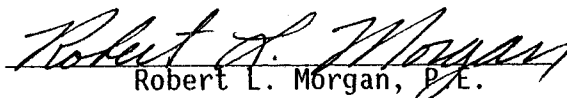
WATER RIGHT NUMBER: 09 - 1498

APPLICATION NO. T62235

1. January 7, 1987 Application received by MP.
 2. January 9, 1987 Application designated for APPROVAL by MP and SG.
 3. Comments:
-
-

Conditions:

This application is hereby APPROVED, dated January 30, 1987, subject to prior rights and this application will expire on March 30, 1987.


Robert L. Morgan, P.E.
State Engineer

CORE LABORATORIES, INC.

Company : MERIDIAN OIL INC.
 Well : HAVASU FEDERAL NO. 42-24 WELL
 Location : SE NE SEC. 24-38S-23E
 Co, State : SAN JUAN COUNTY, UTAH

Field : KACHINA FIELD
 Formation : PARADOX
 Coring Fluid : WATER BASE MUD
 Elevation : 5123' KB

File : 3402-12837
 Date : 16-FEB-1987
 API No. :
 Analysts: DEVIER

CORE ANALYSIS RESULTS

SAMPLE NUMBER	DEPTH ft	PERMEABILITY ----- (MAXIMUM) (90 DEG) Kair Kair md md		POROSITY (HELIUM) %	SATURATION ----- (PORE VOLUME) OIL WATER % %		GRAIN DENSITY gm/cc	DESCRIPTION
CORE NO. 1 5759'-5810' CUT 51' REC 51'								
1	5759.0- 60.0	8.30	8.20	22.6	16.2	48.1	2.83	Dol brn ea slily anhy
2	5760.0- 61.0	12.0	12.0	26.5	21.1	41.1	2.87	Dol brn ea slily anhy
3	5761.0- 62.0	23.0	23.0	27.5	15.4	46.5	2.84	Dol brn ea slily anhy
4	5762.0- 63.0	31.4	29.2	28.4	13.9	51.3	2.83	Dol brn ea slily anhy
5	5763.0- 64.0	20.4	19.8	25.4	15.3	43.9	2.85	Dol brn ea slily anhy
6	5764.0- 65.0	31.8	30.4	26.9	28.1	35.9	2.83	Dol brn ea slily anhy
7	5765.0- 66.0	30.0	30.0	26.7	15.2	46.4	2.85	Dol brn ea slily anhy
8	5766.0- 67.0	28.0	27.0	27.2	12.7	47.5	2.86	Dol brn ea slily anhy
9	5767.0- 68.0	33.2	30.5	25.1	12.0	47.2	2.85	Dol brn ea slily anhy
* 10	5768.0- 69.0		23.1	21.5	12.7	39.0	2.86	Dol brn ea slily anhy
11	5769.0- 70.0	38.7	35.9	27.5	43.2	21.1	2.84	Dol brn ea slily anhy
5770.0-5772.0 PRESERVED								
12	5772.0- 73.0	32.6	31.3	23.2	18.0	38.9	2.81	Dol brn ea slily anhy
13	5773.0- 74.0	22.0	21.0	19.1	15.8	44.0	2.83	Dol brn ea slily anhy
14	5774.0- 75.0	0.09	0.09	6.0	17.9	42.4	2.77	Dol gry brn slily lmy sh lam
+ 15	5775.0- 76.0	2.03	0.29	6.1	9.6	30.8	2.77	Dol gry brn lmy sh lam
16	5776.0- 77.0	0.03	0.02	3.5	13.5	37.0	2.74	Dol gry brn lmy sh lam
17	5777.0- 78.0	0.38	0.20	7.4	8.4	25.1	2.78	Dol gry brn slily lmy slily anhy vf
18	5778.0- 79.0	0.40	0.35	15.7	3.1	71.9	2.83	Dol gry ea slily anhy
19	5779.0- 80.0	0.32	0.32	12.2	6.8	57.7	2.82	Dol gry ea slily anhy

5780.0-5781.0 PRESERVED

CORE LABORATORIES, INC.

Company : MERIDIAN OIL INC.
Well : HAVASU FEDERAL NO. 42-24 WELL

Field : KACHINA FIELD
Formation : PARADOX

File : 3402-12837
Date : 16-FEB-1987

CORE ANALYSIS RESULTS

SAMPLE NUMBER	DEPTH ft	PERMEABILITY (MAXIMUM) (90 DEG) Kair md		POROSITY (HELIUM) %	SATURATION (PORE VOLUME) OIL WATER %		GRAIN DENSITY gm/cc	DESCRIPTION
		Kair md	Kair md		OIL %	WATER %		
* 20	5781.0- 82.0		0.03	8.4	9.3	0.0	2.84	Dol gry slily anhy slily sh vf
* 21	5782.0- 83.0		1.44	9.2	11.5	41.9	2.88	Dol gry slily anhy slily sh vf
22	5783.0- 84.0	0.75	0.61	2.8	4.2	32.4	2.80	Dol gry slily anhy slily sh vf
+ 23	5784.0- 85.0	0.96	0.91	7.9	3.4	55.3	2.88	Dol gry slily anhy slily sh vf
24	5785.0- 86.0	1.71	1.29	6.2	3.2	28.2	2.81	Dol gry slily anhy vf
+ 25	5786.0- 87.0	26.0	3.56	7.4	6.4	29.5	2.81	Dol gry slily anhy p.p. vug vf
26	5787.0- 88.0	2.12	1.93	6.7	13.1	27.3	2.81	Dol gry slily anhy p.p. vug vf
27	5788.0- 89.0	5.18	4.95	12.2	15.0	40.0	2.88	Dol gry slily anhy p.p. vug vf
28	5789.0- 90.0	0.53	0.36	4.5	7.5	29.6	2.80	Dol gry lmy slily anhy vf
29	5790.0- 91.0	0.63	0.29	2.5	1.4	40.0	2.78	Dol gry lmy slily anhy vf
30	5791.0- 92.0	1.80	0.24	1.9	1.8	36.9	2.76	Ls lt gry dol vf
31	5792.0- 93.0	0.31	0.21	1.9	4.2	46.4	2.77	Ls lt gry dol vf
32	5793.0- 94.0	0.12	0.04	1.4	1.3	54.4	2.79	Ls lt gry dol vf
33	5794.0- 95.0	0.17	0.16	4.9	10.3	36.7	2.82	Dol gry lmy slily sh
34	5795.0- 96.0	3.90	3.90	25.9	27.1	61.0	2.83	Dol gry brn ea
35	5796.0- 97.0	0.08	0.07	4.4	8.6	56.1	2.74	Ls gry slily dol sty.
36	5797.0- 98.0	0.51	0.49	9.2	13.4	33.3	2.73	Ls gry slily dol sty
37	5798.0- 99.0	13.0	7.80	17.3	18.0	23.6	2.88	Dol brn gry ea slily anhy
38	5799.0- 00.0	2.10	2.00	10.4	15.8	26.0	2.82	Dol brn gry ea slily anhy
39	5800.0- 01.0	2.15	1.64	13.2	12.3	35.4	2.84	Dol brn gry ea slily anhy
40	5801.0- 02.0	0.96	0.80	9.0	15.4	32.0	2.80	Dol dk gry slily lmy slily sh
41	5802.0- 03.0	3.80	3.10	9.3	20.6	18.7	2.83	Dol dk gry slily lmy slily sh
* 42	5803.0- 04.0		3.08	8.9	18.0	20.6	2.80	Dol dk gry slily lmy slily sh
43	5804.0- 05.0	3.10	3.00	9.5	16.4	20.5	2.80	Dol dk gry slily lmy slily sh
5805.0-5806.0 PRESERVED								
44	5806.0- 07.0	2.60	2.50	8.9	18.2	27.8	2.83	Dol dk gry slily lmy slily sh
45	5807.0- 08.0	11.0	9.9	17.0	24.6	29.1	2.86	Dol brn slily anhy p.p. vug

CORE LABORATORIES, INC.

Company : MERIDIAN OIL INC.
Well : HAVASU FEDERAL NO. 42-24 WELL

Field : KACHINA FIELD
Formation : PARADOX

File : 3402-12837
Date : 16-FEB-1987

CORE ANALYSIS RESULTS

SAMPLE NUMBER	DEPTH ft	PERMEABILITY ----- (MAXIMUM) (90 DEG) Kair Kair md md		POROSITY (HELIUM) %	SATURATION ----- (PORE VOLUME) OIL WATER % %		GRAIN DENSITY gm/cc	DESCRIPTION
* 46	5808.0- 09.0		10.2	17.2	18.8	34.0	2.88	Dol brn slily anhy p.p. vug
47	5809.0- 10.0	1.00	0.74	8.0	13.8	31.7	2.85	Dol brn slily anhy p.p. vug
5810.0-5820.0 LOST CORE								
CORE NO. 2 5820.0-5880.0 CUT 60' REC 60'								
48	5820.0- 21.0	0.12	0.09	4.9	4.1	29.2	2.78	Dol brn lmy p.p. vug slily sh
49	5821.0- 22.0	0.07	0.03	4.8	3.3	37.7	2.79	Dol brn lmy p.p. vug slily sh
50	5822.0- 23.0	0.22	0.19	5.8	14.9	31.2	2.82	Dol brn lmy p.p. vug slily sh
51	5823.0- 24.0	0.67	0.52	6.1	7.1	34.0	2.81	Dol brn lmy p.p. vug slily sh
52	5824.0- 25.0	0.82	0.45	7.4	4.8	36.6	2.77	Dol brn lmy p.p. vug slily sh
53	5825.0- 26.0	1.24	0.82	9.0	27.5	25.4	2.77	Dol brn lmy p.p. vug slily sh
54	5826.0- 27.0	1.60	1.40	11.1	31.0	38.8	2.79	Dol brn lmy p.p. vug slily sh
55	5827.0- 28.0	13.0	12.0	21.1	25.6	22.1	2.84	Dol brn lmy p.p. vug slily sh
56	5828.0- 29.0	7.59	6.51	15.0	32.4	33.1	2.80	Dol brn lmy p.p. vug slily sh
57	5829.0- 30.0	1.36	1.24	13.2	21.2	33.4	2.78	Dol brn lmy p.p. vug slily sh
58	5830.0- 31.0	1.16	1.09	8.8	7.4	44.3	2.78	Dol brn lmy p.p. vug slily sh
59	5831.0- 32.0	8.35	4.51	9.0	7.0	46.7	2.78	Dol brn lmy p.p. vug slily sh
60	5832.0- 33.0	1.49	1.14	9.6	6.9	51.9	2.80	Dol brn lmy p.p. vug slily sh
61	5833.0- 34.0	1.73	1.42	8.7	6.3	44.6	2.81	Dol brn lmy slily sh p.p. vug
62	5834.0- 35.0	2.08	1.13	11.1	1.8	52.3	2.77	Dol brn lmy slily sh p.p. vug
63	5835.0- 36.0	0.54	0.26	8.3	21.2	38.3	2.82	Dol brn slily lmy slily sh p.p. vug
64	5836.0- 37.0	0.69	0.60	9.5	25.6	42.7	2.79	Dol brn slily lmy slily sh p.p. vug
65	5837.0- 38.0	25.0	25.0	13.9	15.6	30.7	2.84	Dol brn slily anhy slily sh p.p. vug
66	5838.0- 39.0	42.0	40.0	22.4	11.5	48.2	2.87	Dol brn slily anhy slily sh p.p. vug
67	5839.0- 40.0	24.0	20.0	18.1	11.1	42.1	2.87	Dol brn slily anhy slily sh p.p. vug
68	5840.0- 41.0	33.0	32.0	24.6	16.1	47.3	2.87	Dol brn slily anhy slily sh p.p. vug

CORE LABORATORIES, INC.

Company : MERIDIAN OIL INC.
Well : HAVASU FEDERAL NO. 42-24 WELL

Field : KACHINA FIELD
Formation : PARADOX

File : 3402-12837
Date : 16-FEB-1987

CORE ANALYSIS RESULTS

SAMPLE NUMBER	DEPTH ft	PERMEABILITY		POROSITY (HELIUM) %	SATURATION		GRAIN DENSITY gm/cc	DESCRIPTION
		----- (MAXIMUM) (90 DEG)			----- (PORE VOLUME)			
		Kair md	Kair md		OIL %	WATER %		
69	5841.0- 42.0	19.0	14.0	20.2	18.2	48.1	2.87	Dol brn slily anhy slily sh p.p. vug
70	5842.0- 43.0	39.0	38.0	19.1	13.0	37.6	2.86	Dol brn slily anhy slily sh p.p. vug
71	5843.0- 44.0	54.0	46.0	22.7	28.0	20.0	2.86	Dol brn slily anhy slily sh p.p. vug
72	5844.0- 45.0	22.0	21.0	17.2	16.7	30.7	2.86	Dol brn slily anhy slily sh p.p. vug
73	5845.0- 46.0	7.04	6.63	16.5	12.8	35.2	2.86	Dol brn slily anhy slily sh p.p. vug
74	5846.0- 47.0	24.0	23.0	21.0	15.9	47.1	2.87	Dol brn slily anhy slily sh p.p. vug
75	5847.0- 48.0	12.0	11.0	17.8	17.7	53.2	2.88	Dol brn slily anhy slily sh p.p. vug
76	5848.0- 49.0	2.73	1.28	9.5	18.9	49.9	2.82	Dol brn slily anhy slily sh p.p. vug
77	5849.0- 50.0	0.16	0.15	6.2	7.4	45.8	2.79	Dol brn slily anhy slily sh p.p. vug
78	5850.0- 51.0	0.42	0.14	7.2	20.5	24.6	2.76	Dol brn lmy p.p. vug
79	5851.0- 52.0	0.20	0.15	5.0	10.0	29.8	2.76	Dol brn lmy p.p. vug
80	5852.0- 53.0	0.11	0.10	4.4	17.6	25.5	2.74	Dol brn lmy p.p. vug
81	5853.0- 54.0	2.00	0.64	7.3	5.3	28.8	2.76	Ls gry slily dol p.p. vug
82	5854.0- 55.0	1.55	1.20	6.9	7.6	30.3	2.75	Ls gry slily dol p.p. vug
83	5855.0- 56.0	1.67	1.43	6.4	8.8	22.9	2.76	Ls gry slily dol p.p. vug
84	5856.0- 57.0	0.76	0.60	6.2	5.9	23.3	2.75	Ls gry slily dol p.p. vug
85	5857.0- 58.0	3.33	2.89	6.6	9.1	19.7	2.75	Ls gry slily dol p.p. vug
86	5858.0- 59.0	17.0	8.37	6.6	12.5	21.1	2.73	Ls gry slily dol vug
87	5859.0- 60.0	127.	84.0	11.1	10.7	19.9	2.72	Ls gry slily dol vug
88	5860.0- 61.0	5.71	3.81	7.3	10.2	20.3	2.72	Ls gry slily dol vug
89	5861.0- 62.0	32.0	25.0	11.1	7.8	25.6	2.71	Ls gry slily dol vug
90	5862.0- 63.0	9.15	4.92	7.9	9.7	27.1	2.73	Ls gry slily dol vug
91	5863.0- 64.0	0.45	0.13	4.0	12.7	27.0	2.74	Ls gry slily dol foss vf
92	5864.0- 65.0	0.95	0.53	3.7	12.8	34.9	2.75	Ls gry slily dol foss vf
93	5865.0- 66.0	7.21	5.64	10.8	2.7	45.5	2.83	Ls gry slily dol foss vf
94	5866.0- 67.0	1.16	1.02	3.4	2.6	47.8	2.76	Ls gry slily dol foss vf
95	5867.0- 68.0	0.19	0.09	3.5	2.1	48.2	2.76	Ls gry slily dol foss vf
96	5868.0- 69.0	0.23	0.20	5.5	0.0	35.0	2.76	Ls gry slily dol foss vf
97	5869.0- 70.0	0.21	0.19	3.8	0.0	51.9	2.75	Ls gry slily dol foss vf

CORE LABORATORIES, INC.

Company : MERIDIAN OIL INC.
Well : HAVASU FEDERAL NO. 42-24 WELL

Field : KACHINA FIELD
Formation : PARADOX

File : 3402-12837
Date : 16-FEB-1987

CORE ANALYSIS RESULTS

SAMPLE NUMBER	DEPTH ft	PERMEABILITY		POROSITY (HELIUM) %	SATURATION		GRAIN DENSITY gm/cc	DESCRIPTION
		----- (MAXIMUM) (90 DEG)			----- (PORE VOLUME)			
		Kair md	Kair md		OIL %	WATER %		
98	5870.0- 71.0	0.43	0.33	5.3	0.0	38.0	2.73	Ls gry slily dol foss vf
99	5871.0- 72.0	0.57	0.39	6.1	0.0	33.3	2.74	Ls gry slily dol foss vf
100	5872.0- 73.0	5.70	0.72	5.2	0.0	31.9	2.74	Ls gry slily dol foss vf
101	5873.0- 74.0	0.22	0.16	3.6	0.0	33.3	2.73	Ls gry slily dol foss vf
102	5874.0- 75.0	0.01	<0.01	1.3	0.0	45.5	2.69	Ls gry slily dol foss vf
103	5875.0- 76.0	0.07	0.01	1.1	0.0	50.0	2.69	Ls gry slily dol foss vf
104	5876.0- 77.0	0.02	0.01	4.5	0.0	37.8	2.74	Ls gry slily dol foss vf
105	5877.0- 78.0	3.10	3.00	8.1	0.0	40.5	2.78	Ls gry dol foss p.p. vug
+ 106	5878.0- 79.0	29.0	0.14	4.7	0.0	25.0	2.75	Ls gry dol foss p.p. vug
107	5879.0- 80.0	0.09	0.02	1.5	0.0	71.4	2.80	Ls gry dol foss

+ DENOTES HORIZONTAL CRACK

* DENOTES PLUG PERMEABILITY

CORE LABORATORIES, INC.

Company : MERIDIAN OIL INC.
Well : HAVASU FEDERAL NO. 42-24 WELL

Field : KACHINA FIELD
Formation : PARADOX

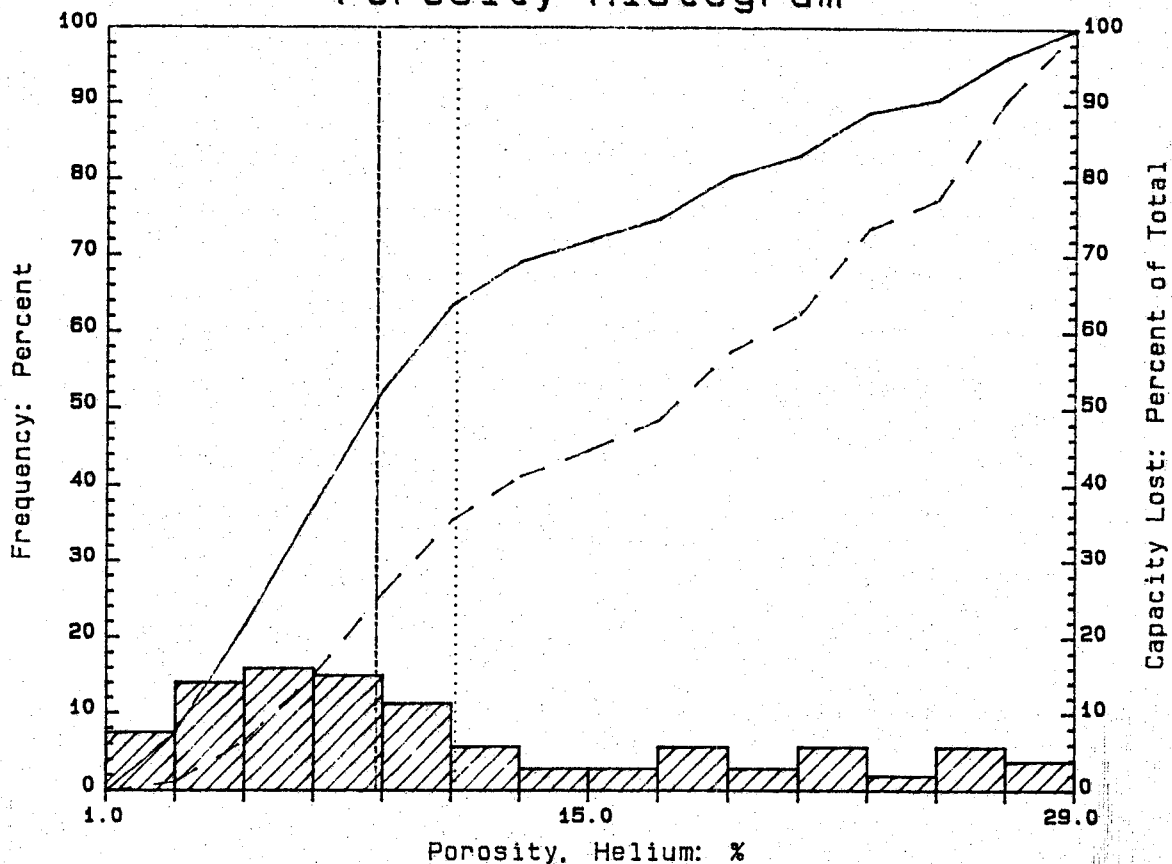
File : 3402-12837
Date : 16-FEB-1987

TABLE I

SUMMARY OF CORE DATA

ZONE AND CUTOFF DATA		CHARACTERISTICS REMAINING AFTER CUTOFFS			
ZONE:		ZONE:		PERMEABILITY:	
Identification	PARADOX	Number of Samples	107	Flow Capacity	845.1 md-ft
Top Depth	5759.0 ft	Thickness Represented -	107.0 ft	Arithmetic Average	7.90 md
Bottom Depth	5880.0 ft			Geometric Average	1.35 md
Number of Samples	107			Harmonic Average	0.067 md
DATA TYPE:		POROSITY:		Minimum	0.001 md
Porosity	HELIUM	Storage Capacity	1187.3 0-ft	Maximum	84.0 md
Permeability --	90 DEG	Arithmetic Average	11.1 %	Median	1.28 md
		Minimum	1.1 %	Standard Deviation	10 ^{±1.127} md
		Maximum	28.4 %		
		Median	8.8 %	HETEROGENEITY (Permeability):	
		Standard Deviation	±7.6 %	Variation	0.917
CUTOFFS:		GRAIN DENSITY:		Lorenz Coefficient	0.967
Porosity (Minimum)	0.0 %	Arithmetic Average	2.80 gm/cc	AVERAGE SATURATIONS (Pore Volume):	
Permeability (Minimum) ...	0.0000 md	Minimum	2.69 gm/cc	Oil	15.8 %
Water Saturation (Maximum)	100.0 %	Maximum	2.88 gm/cc	Water	38.6 %
Oil Saturation (Minimum) -	0.0 %	Median	2.80 gm/cc		
Grain Density (Minimum) --	2.00 gm/cc	Standard Deviation	±0.05 gm/cc		
Grain Density (Maximum) --	3.00 gm/cc				
Lithology Excluded	NONE				

Porosity Histogram



MERIDIAN OIL INC.
 HAVASU FEDERAL NO. 42-24 WELL
 KACHINA FIELD
 SAN JUAN COUNTY, UTAH
 PARADOX (5759-5880 feet)

Page 6

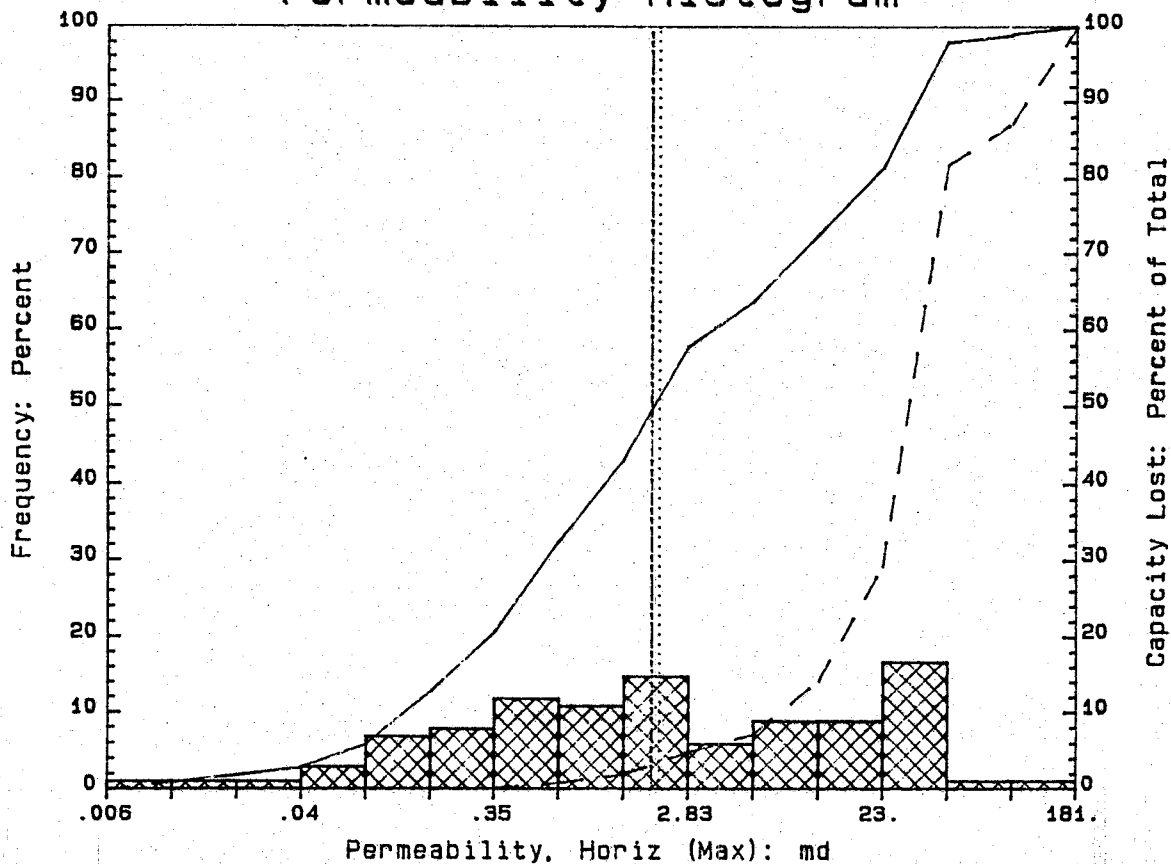
Core Laboratories, Inc.

16-Feb-1987

- LEGEND -

- Median Value (8.8)
- Arith. Average (11.1)
- Cumulative Frequency
- - - Cumulative Capacity Lost

Permeability Histogram



MERIDIAN OIL INC.
 HAVASU FEDERAL NO. 42-24 WELL
 KACHINA FIELD
 SAN JUAN COUNTY, UTAH
 PARADOX (5759-5880 feet)

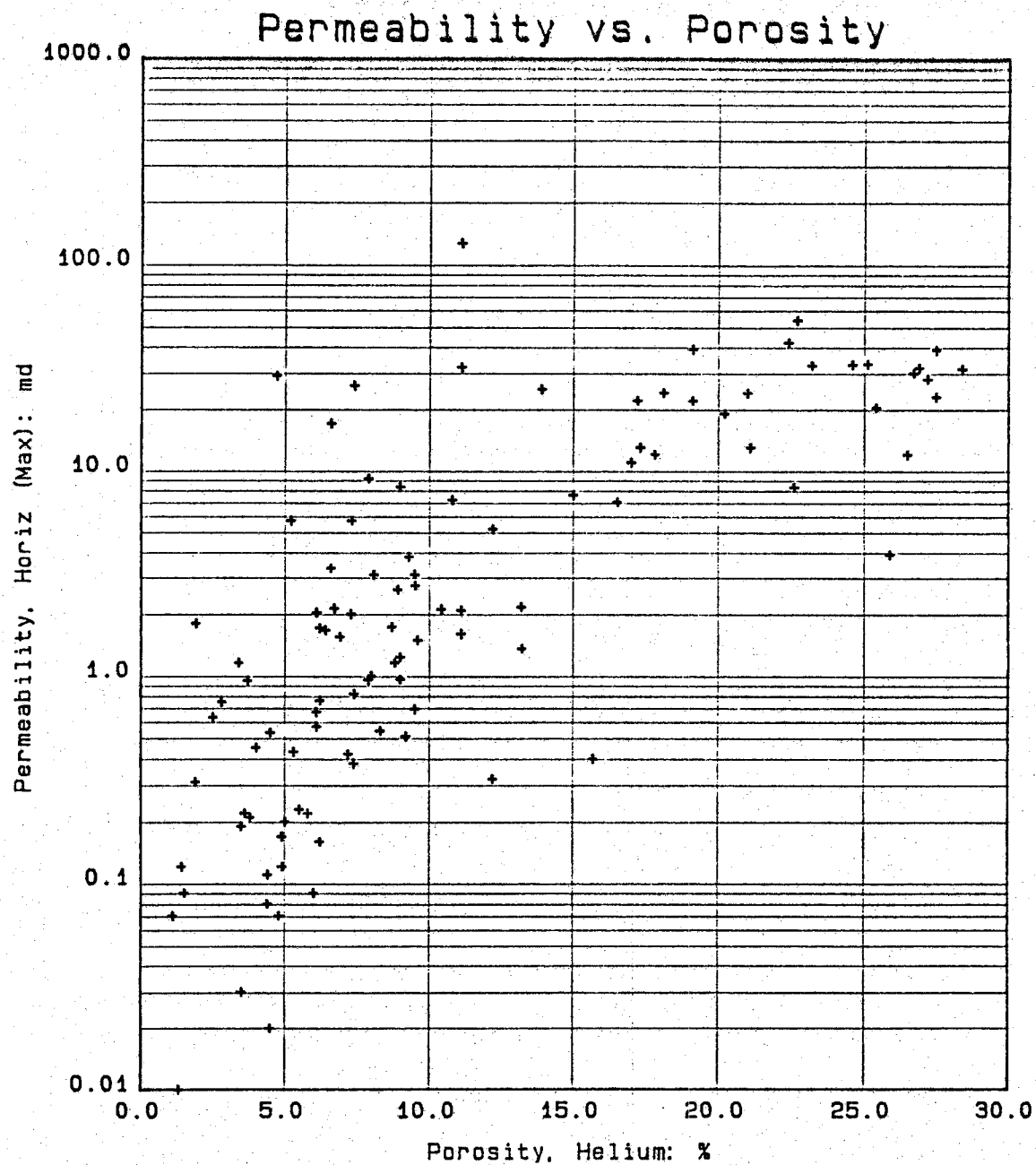
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Core Laboratories, Inc.

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- LEGEND -

- Median Value (1.90)
- Geom. Average (2.05)
- Cumulative Frequency
- - - - Cumulative Capacity Lost



MERIDIAN OIL INC.
HAVASU FEDERAL NO. 42-24 WELL
KACHINA FIELD
SAN JUAN COUNTY, UTAH
PARADOX (5759-5880 feet)

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Core Laboratories, Inc.

16-Feb-1987

- LEGEND -
PARADOX

DISTRIBUTION OF FINAL REPORT -

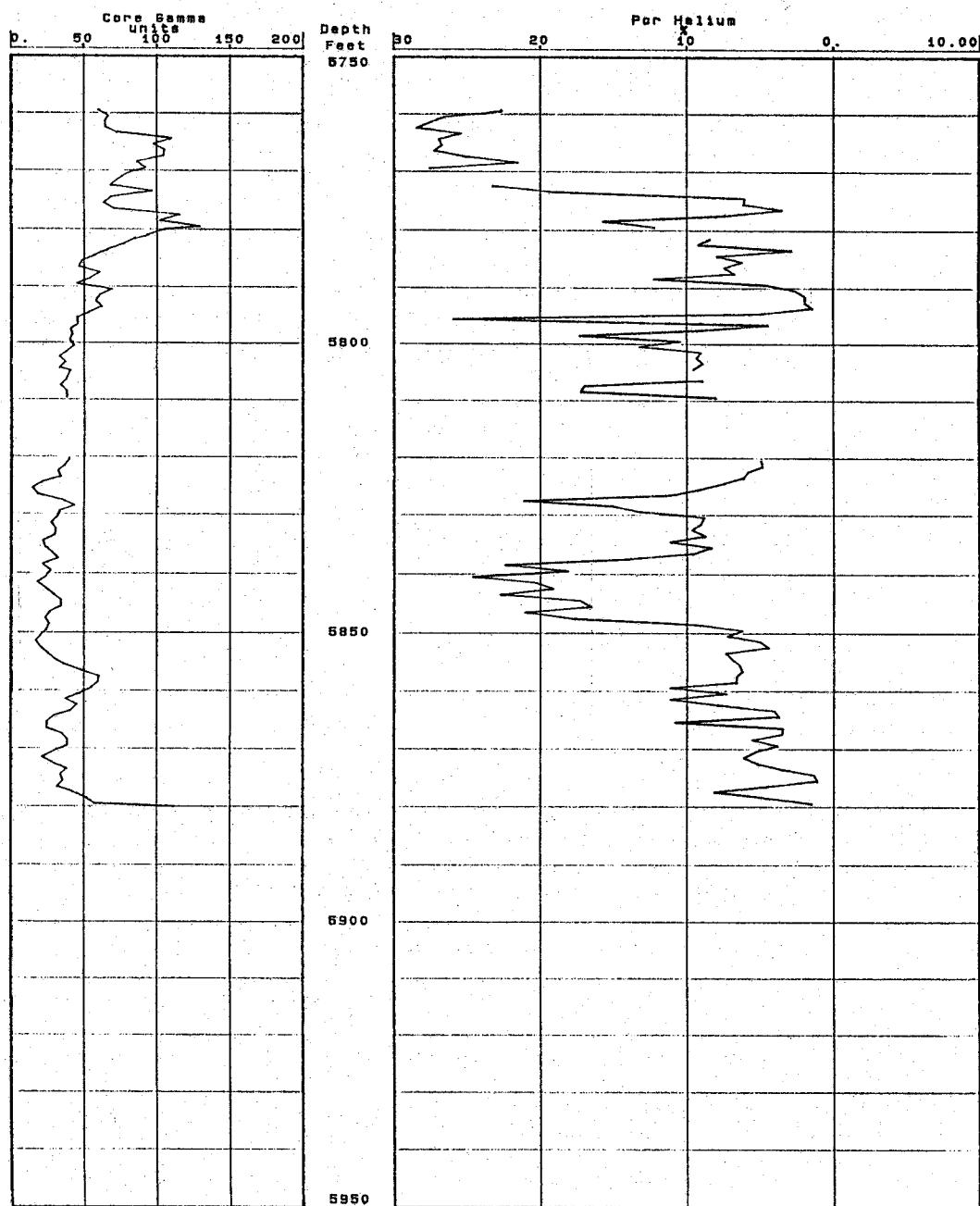
MERIDIAN OIL INC.
Havasu Federal No. 42-24 Well
San Juan County, Utah
CLI File 3402-12837

- 4 cc - MERIDIAN OIL INC.
Attn: Ms. Cindy L. Crawley
5613 DTC Parkway
Englewood, Colorado 80111
- 2 cc - MERIDIAN OIL INC.
Attn: Mr. Johnny Wright
175 North 27th Street
Billings, Montana 59101
- 1 cc - BWAB INCORPORATED
Attn: Mr. Bob Lent
1801 California
#1000 CC4
Denver, Colorado 80202
- 1 cc - TX EAST SKY OIL COMPANY (TESOC)
Attn: Mr. Michael Anderson
1775 Sherman Street
Suite 1200
Denver, Colorado 80203
- 1 cc - TEXAS EASTERN CORPORATION
Attn: Mr. C. E. Fern
P. O. Box 2521
Houston, Texas 77252
- 2 cc - CITIES SERVICES OIL & GAS
Attn: Ms. Jane Barton
P. O. Box 1919
Midland, Texas 79702

MERIDIAN OIL INC.
HAVASU FEDERAL NO. 42-24 WELL
KACHINA FIELD
SAN JUAN COUNTY, UTAH
PARADOX (5759-5860 feet)

Core Laboratories, Inc.

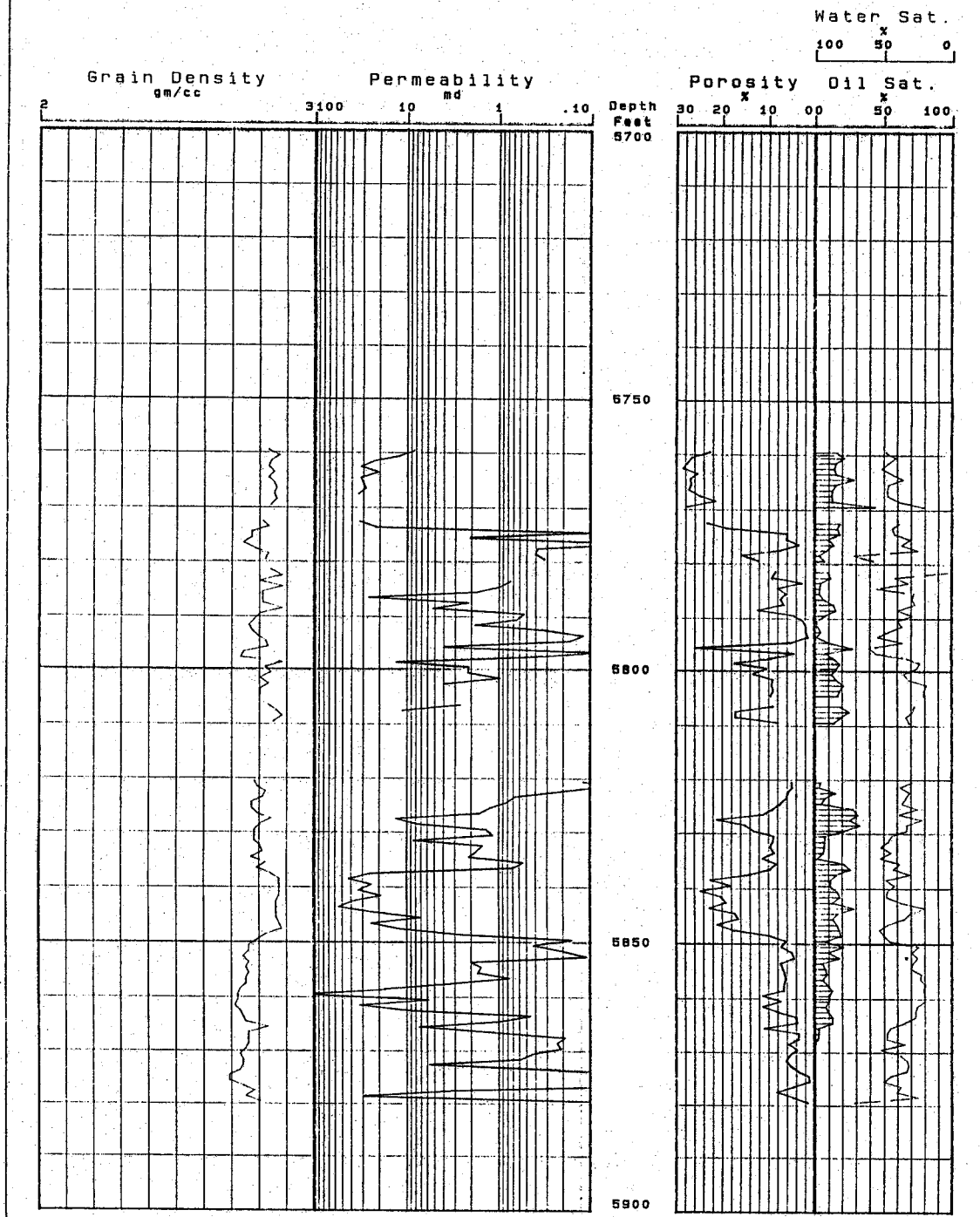
16-Feb-1987



MERIDIAN OIL INC.
HAVASU FEDERAL NO. 42-24 WELL
KACHINA FIELD
SAN JUAN COUNTY, UTAH
PARADOX (5759-5880 feet)

Core Laboratories, Inc.

16-Feb-1987



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MERIDIAN OIL INC.

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OPERATIONS/DRILLING

DIVISION OF
OIL, GAS & MINING

021704

CORE ANALYSIS REPORT

FOR

MERIDIAN OIL INC.

HAVASU FEDERAL NO. 42-24 WELL
KACHINA FIELD
SAN JUAN COUNTY, UTAH

POW-15my
43-037-31298
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CORE LABORATORIES, INC.
Petroleum Reservoir Engineering

OKLAHOMA CITY, OKLAHOMA

February 24, 1987

REPLY TO
SUITE 133
400 SOUTH VERMONT
OKLAHOMA CITY, OK
73108

Meridian Oil Inc.
5613 DTC Parkway
Englewood, Colorado 80111

Attn: Ms. Cindy L. Crawley

Subject: Core Analysis Data
Havasu Federal No. 42-24
San Juan County, Utah
CLI File 3402-12837

Dear Ms. Crawley:

Cores taken in the subject well in the Paradox formation were received at the Oklahoma City laboratory for special analytical testing described on the Procedure Page.

The accompanying Coregraph presents the Surface Core-Gamma Log and binomially averaged core analysis data in graphical form to aid correlation with downhole electrical surveys.

Tabular presentation of the measured physical properties may be found on pages one through five of this report.

Histograms of porosity and permeability in addition to a graph of permeability versus porosity may be found on pages six through eight.

It is a pleasure to have this opportunity of serving you.

Very truly yours,

CORE LABORATORIES, INC.

Charles A. Devier

Charles A. Devier
Laboratory Manager

CAD:ja

Meridian Oil Inc.
Havasu Federal No. 42-24 Well
CLI File 3402-12837

Procedure Page

Handling and Analytical Procedures

Diamond coring equipment and water base mud were used to obtain 3.5 inch diameter cores between 5,759.0 and 5,880.0 feet.

The cores were preserved in saran, foil and plastic bags by CLI personnel.

The cores were transported to Oklahoma City by motor freight.

A Core-Gamma Log was recorded for downhole electric log correlation.

Core analysis was made on right cylinder full diameter samples.

Fluid removal was accomplished using low temperature extraction.

Porosity was determined by Boyle's law method.

Air permeability in two horizontal directions was measured without Klinkenberg correction.

Temporary storage of cores in Oklahoma City laboratory for a period of thirty days without additional charge.

CORE LABORATORIES, INC.

Company : MERIDIAN OIL INC.
 Well : HAVASU FEDERAL NO. 42-24 WELL
 Location : SE NE SEC. 24-38S-23E
 Co, State : SAN JUAN COUNTY, UTAH

Field : KACHINA FIELD
 Formation : PARADOX
 Coring Fluid : WATER BASE MUD
 Elevation : 5123' KB

File : 3402-12837
 Date : 16-FEB-1987
 API No. :
 Analysts: DEVIER

CORE ANALYSIS RESULTS

SAMPLE NUMBER	DEPTH ft	PERMEABILITY		POROSITY (HELIUM) %	SATURATION		GRAIN DENSITY gm/cc	DESCRIPTION
		----- (MAXIMUM) (90 DEG)			----- (PORE VOLUME)			
		Kair	Kair		OIL	WATER		
		md	md		%	%		

CORE NO. 1 5759'-5810' CUT 51' REC 51'

	1	5759.0- 60.0	8.30	8.20	22.6	16.2	48.1	2.83	Dol brn ea slily anhy
	2	5760.0- 61.0	12.0	12.0	26.5	21.1	41.1	2.87	Dol brn ea slily anhy
	3	5761.0- 62.0	23.0	23.0	27.5	15.4	46.5	2.84	Dol brn ea slily anhy
	4	5762.0- 63.0	31.4	29.2	28.4	13.9	51.3	2.83	Dol brn ea slily anhy
	5	5763.0- 64.0	20.4	19.8	25.4	15.3	43.9	2.85	Dol brn ea slily anhy
	6	5764.0- 65.0	31.8	30.4	26.9	28.1	35.9	2.83	Dol brn ea slily anhy
	7	5765.0- 66.0	30.0	30.0	26.7	15.2	46.4	2.85	Dol brn ea slily anhy
	8	5766.0- 67.0	28.0	27.0	27.2	12.7	47.5	2.86	Dol brn ea slily anhy
	9	5767.0- 68.0	33.2	30.5	25.1	12.0	47.2	2.85	Dol brn ea slily anhy
*	10	5768.0- 69.0		23.1	21.5	12.7	39.0	2.86	Dol brn ea slily anhy
	11	5769.0- 70.0	38.7	35.9	27.5	43.2	21.1	2.84	Dol brn ea slily anhy

5770.0-5772.0 PRESERVED

	12	5772.0- 73.0	32.6	31.3	23.2	18.0	38.9	2.81	Dol brn ea slily anhy
	13	5773.0- 74.0	22.0	21.0	19.1	15.8	44.0	2.83	Dol brn ea slily anhy
	14	5774.0- 75.0	0.09	0.09	6.0	17.9	42.4	2.77	Dol gry brn slily lmy sh lam
+	15	5775.0- 76.0	2.03	0.29	6.1	9.6	30.8	2.77	Dol gry brn lmy sh lam
	16	5776.0- 77.0	0.03	0.02	3.5	13.5	37.0	2.74	Dol gry brn lmy sh lam
	17	5777.0- 78.0	0.38	0.20	7.4	8.4	25.1	2.78	Dol gry brn slily lmy slily anhy wf
	18	5778.0- 79.0	0.40	0.35	15.7	3.1	71.9	2.83	Dol gry ea slily anhy
	19	5779.0- 80.0	0.32	0.32	12.2	6.8	57.7	2.82	Dol gry ea slily anhy

5780.0-5781.0 PRESERVED

CORE LABORATORIES, INC.

Company : MERIDIAN OIL INC.
Well : HAVASU FEDERAL NO. 42-24 WELL

Field : KACHINA FIELD
Formation : PARADOX

File : 3402-12837
Date : 16-FEB-1987

CORE ANALYSIS RESULTS

SAMPLE NUMBER	DEPTH ft	PERMEABILITY ----- (MAXIMUM) (90 DEG) Kair Kair md md		POROSITY (HELIUM) %	SATURATION ----- (PORE VOLUME) OIL WATER % %		GRAIN DENSITY gm/cc	DESCRIPTION
* 20	5781.0- 82.0		0.03	8.4	9.3	0.0	2.84	Dol gry slily anhy slily sh vf
* 21	5782.0- 83.0		1.44	9.2	11.5	41.9	2.88	Dol gry slily anhy slily sh vf
22	5783.0- 84.0	0.75	0.61	2.8	4.2	32.4	2.80	Dol gry slily anhy slily sh vf
+ 23	5784.0- 85.0	0.96	0.91	7.9	3.4	55.3	2.88	Dol gry slily anhy slily sh vf
24	5785.0- 86.0	1.71	1.29	6.2	3.2	28.2	2.81	Dol gry slily anhy vf
+ 25	5786.0- 87.0	26.0	3.56	7.4	6.4	29.5	2.81	Dol gry slily anhy p.p. vug vf
26	5787.0- 88.0	2.12	1.93	6.7	13.1	27.3	2.81	Dol gry slily anhy p.p. vug vf
27	5788.0- 89.0	5.18	4.95	12.2	15.0	40.0	2.88	Dol gry slily anhy p.p. vug vf
28	5789.0- 90.0	0.53	0.36	4.5	7.5	29.6	2.80	Dol gry lmy slily anhy vf
29	5790.0- 91.0	0.63	0.29	2.5	1.4	40.0	2.78	Dol gry lmy slily anhy vf
30	5791.0- 92.0	1.80	0.24	1.9	1.8	36.9	2.76	Ls lt gry dol vf
31	5792.0- 93.0	0.31	0.21	1.9	4.2	46.4	2.77	Ls lt gry dol vf
32	5793.0- 94.0	0.12	0.04	1.4	1.3	54.4	2.79	Ls lt gry dol vf
33	5794.0- 95.0	0.17	0.16	4.9	10.3	36.7	2.82	Dol gry lmy slily sh
34	5795.0- 96.0	3.90	3.90	25.9	27.1	61.0	2.83	Dol gry brn ea
35	5796.0- 97.0	0.08	0.07	4.4	8.6	56.1	2.74	Ls gry slily dol sty.
36	5797.0- 98.0	0.51	0.49	9.2	13.4	33.3	2.73	Ls gry slily dol sty
37	5798.0- 99.0	13.0	7.80	17.3	18.0	23.6	2.88	Dol brn gry ea slily anhy
38	5799.0- 00.0	2.10	2.00	10.4	15.8	26.0	2.82	Dol brn gry ea slily anhy
39	5800.0- 01.0	2.15	1.64	13.2	12.3	35.4	2.84	Dol brn gry ea slily anhy
40	5801.0- 02.0	0.96	0.80	9.0	15.4	32.0	2.80	Dol dk gry slily lmy slily sh
41	5802.0- 03.0	3.80	3.10	9.3	20.6	18.7	2.83	Dol dk gry slily lmy slily sh
* 42	5803.0- 04.0		3.08	8.9	18.0	20.6	2.80	Dol dk gry slily lmy slily sh
43	5804.0- 05.0	3.10	3.00	9.5	16.4	20.5	2.80	Dol dk gry slily lmy slily sh
5805.0-5806.0 PRESERVED								
44	5806.0- 07.0	2.60	2.50	8.9	18.2	27.8	2.83	Dol dk gry slily lmy slily sh
45	5807.0- 08.0	11.0	9.9	17.0	24.6	29.1	2.86	Dol brn slily anhy p.p. vug

CORE LABORATORIES, INC.

Company : MERIDIAN OIL INC.
Well : HAVASU FEDERAL NO. 42-24 WELL

Field : KACHINA FIELD
Formation : PARADOX

File : 3402-12837
Date : 16-FEB-1987

CORE ANALYSIS RESULTS

SAMPLE NUMBER	DEPTH ft	PERMEABILITY ----- (MAXIMUM) (90 DEG) Kair Kair md md		POROSITY (HELIUM) %	SATURATION ----- (PORE VOLUME) OIL WATER % %		GRAIN DENSITY gm/cc	DESCRIPTION
* 46	5808.0- 09.0		10.2	17.2	18.8	34.0	2.88	Dol brn slily anhy p.p. vug
47	5809.0- 10.0	1.00	0.74	8.0	13.8	31.7	2.85	Dol brn slily anhy p.p. vug
5810.0-5820.0 LOST CORE								
CORE NO. 2 5820.0-5880.0 CUT 60' REC 60'								
48	5820.0- 21.0	0.12	0.09	4.9	4.1	29.2	2.78	Dol brn lmy p.p. vug slily sh
49	5821.0- 22.0	0.07	0.03	4.8	3.3	37.7	2.79	Dol brn lmy p.p. vug slily sh
50	5822.0- 23.0	0.22	0.19	5.8	14.9	31.2	2.82	Dol brn lmy p.p. vug slily sh
51	5823.0- 24.0	0.67	0.52	6.1	7.1	34.0	2.81	Dol brn lmy p.p. vug slily sh
52	5824.0- 25.0	0.82	0.45	7.4	4.8	36.6	2.77	Dol brn lmy p.p. vug slily sh
53	5825.0- 26.0	1.24	0.82	9.0	27.5	25.4	2.77	Dol brn lmy p.p. vug slily sh
54	5826.0- 27.0	1.60	1.40	11.1	31.0	38.8	2.79	Dol brn lmy p.p. vug slily sh
55	5827.0- 28.0	13.0	12.0	21.1	25.6	22.1	2.84	Dol brn lmy p.p. vug slily sh
56	5828.0- 29.0	7.59	6.51	15.0	32.4	33.1	2.80	Dol brn lmy p.p. vug slily sh
57	5829.0- 30.0	1.36	1.24	13.2	21.2	33.4	2.78	Dol brn lmy p.p. vug slily sh
58	5830.0- 31.0	1.16	1.09	8.8	7.4	44.3	2.78	Dol brn lmy p.p. vug slily sh
59	5831.0- 32.0	8.35	4.51	9.0	7.0	46.7	2.78	Dol brn lmy p.p. vug slily sh
60	5832.0- 33.0	1.49	1.14	9.6	6.9	51.9	2.80	Dol brn lmy p.p. vug slily sh
61	5833.0- 34.0	1.73	1.42	8.7	6.3	44.6	2.81	Dol brn lmy slily sh p.p. vug
62	5834.0- 35.0	2.08	1.13	11.1	1.8	52.3	2.77	Dol brn lmy slily sh p.p. vug
63	5835.0- 36.0	0.54	0.26	8.3	21.2	38.3	2.82	Dol brn slily lmy slily sh p.p. vug
64	5836.0- 37.0	0.69	0.60	9.5	25.6	42.7	2.79	Dol brn slily lmy slily sh p.p. vug
65	5837.0- 38.0	25.0	25.0	13.9	15.6	30.7	2.84	Dol brn slily anhy slily sh p.p. vug
66	5838.0- 39.0	42.0	40.0	22.4	11.5	48.2	2.87	Dol brn slily anhy slily sh p.p. vug
67	5839.0- 40.0	24.0	20.0	18.1	11.1	42.1	2.87	Dol brn slily anhy slily sh p.p. vug
68	5840.0- 41.0	33.0	32.0	24.6	16.1	47.3	2.87	Dol brn slily anhy slily sh p.p. vug

CORE LABORATORIES, INC.

Company : MERIDIAN OIL INC.
Well : HAVASU FEDERAL NO. 42-24 WELL

Field : KACHINA FIELD
Formation : PARADOX

File : 3402-12837
Date : 16-FEB-1987

CORE ANALYSIS RESULTS

SAMPLE NUMBER	DEPTH ft	PERMEABILITY ----- (MAXIMUM) (90 DEG) Kair Kair md md		POROSITY (HELIUM) %	SATURATION ----- (PORE VOLUME) OIL WATER % %		GRAIN DENSITY gm/cc	DESCRIPTION
69	5841.0- 42.0	19.0	14.0	20.2	18.2	48.1	2.87	Dol brn slily anhy slily sh p.p. vug
70	5842.0- 43.0	39.0	38.0	19.1	13.0	37.6	2.86	Dol brn slily anhy slily sh p.p. vug
71	5843.0- 44.0	54.0	46.0	22.7	28.0	20.0	2.86	Dol brn slily anhy slily sh p.p. vug
72	5844.0- 45.0	22.0	21.0	17.2	16.7	30.7	2.86	Dol brn slily anhy slily sh p.p. vug
73	5845.0- 46.0	7.04	6.63	16.5	12.8	35.2	2.86	Dol brn slily anhy slily sh p.p. vug
74	5846.0- 47.0	24.0	23.0	21.0	15.9	47.1	2.87	Dol brn slily anhy slily sh p.p. vug
75	5847.0- 48.0	12.0	11.0	17.8	17.7	53.2	2.88	Dol brn slily anhy slily sh p.p. vug
76	5848.0- 49.0	2.73	1.28	9.5	18.9	49.9	2.82	Dol brn slily anhy slily sh p.p. vug
77	5849.0- 50.0	0.16	0.15	6.2	7.4	45.8	2.79	Dol brn slily anhy slily sh p.p. vug
78	5850.0- 51.0	0.42	0.14	7.2	20.5	24.6	2.76	Dol brn lmy p.p. vug
79	5851.0- 52.0	0.20	0.15	5.0	10.0	29.8	2.76	Dol brn lmy p.p. vug
80	5852.0- 53.0	0.11	0.10	4.4	17.6	25.5	2.74	Dol brn lmy p.p. vug
81	5853.0- 54.0	2.00	0.64	7.3	5.3	28.8	2.76	Ls gry slily dol p.p. vug
82	5854.0- 55.0	1.55	1.20	6.9	7.6	30.3	2.75	Ls gry slily dol p.p. vug
83	5855.0- 56.0	1.67	1.43	6.4	8.8	22.9	2.76	Ls gry slily dol p.p. vug
84	5856.0- 57.0	0.76	0.60	6.2	5.9	23.3	2.75	Ls gry slily dol p.p. vug
85	5857.0- 58.0	3.33	2.89	6.6	9.1	19.7	2.75	Ls gry slily dol p.p. vug
86	5858.0- 59.0	17.0	8.37	6.6	12.5	21.1	2.73	Ls gry slily dol vug
87	5859.0- 60.0	127.	84.0	11.1	10.7	19.9	2.72	Ls gry slily dol vug
88	5860.0- 61.0	5.71	3.81	7.3	10.2	20.3	2.72	Ls gry slily dol vug
89	5861.0- 62.0	32.0	25.0	11.1	7.8	25.6	2.71	Ls gry slily dol vug
90	5862.0- 63.0	9.15	4.92	7.9	9.7	27.1	2.73	Ls gry slily dol vug
91	5863.0- 64.0	0.45	0.13	4.0	12.7	27.0	2.74	Ls gry slily dol foss vf
92	5864.0- 65.0	0.95	0.53	3.7	12.8	34.9	2.75	Ls gry slily dol foss vf
93	5865.0- 66.0	7.21	5.64	10.8	2.7	45.5	2.83	Ls gry slily dol foss vf
94	5866.0- 67.0	1.16	1.02	3.4	2.6	47.8	2.76	Ls gry slily dol foss vf
95	5867.0- 68.0	0.19	0.09	3.5	2.1	48.2	2.76	Ls gry slily dol foss vf
96	5868.0- 69.0	0.23	0.20	5.5	0.0	35.0	2.76	Ls gry slily dol foss vf
97	5869.0- 70.0	0.21	0.19	3.8	0.0	51.9	2.75	Ls gry slily dol foss vf

CORE LABORATORIES, INC.

Company : MERIDIAN OIL INC.
Well : HAVASU FEDERAL NO. 42-24 WELL

Field : KACHINA FIELD
Formation : PARADOX

File : 3402-12837
Date : 16-FEB-1987

CORE ANALYSIS RESULTS

SAMPLE NUMBER	DEPTH ft	PERMEABILITY		POROSITY (HELIUM) %	SATURATION		GRAIN DENSITY gm/cc	DESCRIPTION
		(MAXIMUM) Kair md	(90 DEG) Kair md		(PORE VOLUME) OIL %	WATER %		
98	5870.0- 71.0	0.43	0.33	5.3	0.0	38.0	2.73	Ls gry slily dol foss vf
99	5871.0- 72.0	0.57	0.39	6.1	0.0	33.3	2.74	Ls gry slily dol foss vf
100	5872.0- 73.0	5.70	0.72	5.2	0.0	31.9	2.74	Ls gry slily dol foss vf
101	5873.0- 74.0	0.22	0.16	3.6	0.0	33.3	2.73	Ls gry slily dol foss vf
102	5874.0- 75.0	0.01	<0.01	1.3	0.0	45.5	2.69	Ls gry slily dol foss vf
103	5875.0- 76.0	0.07	0.01	1.1	0.0	50.0	2.69	Ls gry slily dol foss vf
104	5876.0- 77.0	0.02	0.01	4.5	0.0	37.8	2.74	Ls gry slily dol foss vf
105	5877.0- 78.0	3.10	3.00	8.1	0.0	40.5	2.78	Ls gry dol foss p.p. vug
+ 106	5878.0- 79.0	29.0	0.14	4.7	0.0	25.0	2.75	Ls gry dol foss p.p. vug
107	5879.0- 80.0	0.09	0.02	1.5	0.0	71.4	2.80	Ls gry dol foss

+ DENOTES HORIZONTAL CRACK

* DENOTES PLUG PERMEABILITY

CORE LABORATORIES, INC.

Company : MERIDIAN OIL INC.
Well : HAVASU FEDERAL NO. 42-24 WELL

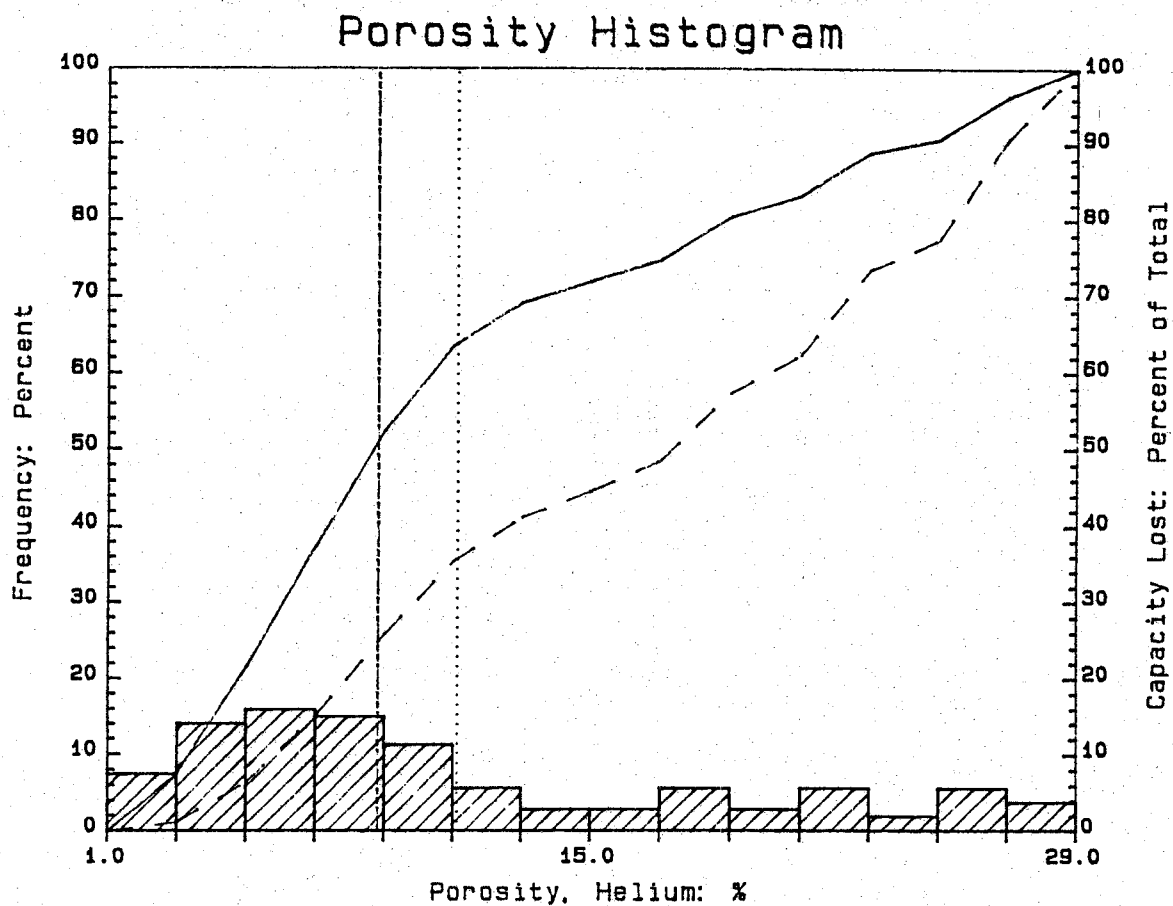
Field : KACHINA FIELD
Formation : PARADOX

File : 3402-12837
Date : 16-FEB-1987

TABLE I

SUMMARY OF CORE DATA

ZONE AND CUTOFF DATA		CHARACTERISTICS REMAINING AFTER CUTOFFS			
ZONE:		ZONE:		PERMEABILITY:	
Identification	PARADOX	Number of Samples	107	Flow Capacity	845.1 md-ft
Top Depth	5759.0 ft	Thickness Represented ..	107.0 ft	Arithmetic Average	7.90 md
Bottom Depth	5880.0 ft			Geometric Average	1.35 md
Number of Samples	107	POROSITY:		Harmonic Average	0.067 md
DATA TYPE:		Storage Capacity	1187.3 0-ft	Minimum	0.001 md
Porosity	HELIUM	Arithmetic Average	11.1 %	Maximum	84.0 md
Permeability ..	90 DEG	Minimum	1.1 %	Median	1.28 md
		Maximum	28.4 %	Standard Deviation	10 ^{±1.127} md
		Median	8.8 %		
CUTOFFS:		Standard Deviation	±7.6 %	HETEROGENEITY (Permeability):	
Porosity (Minimum)	0.0 %	GRAIN DENSITY:		Variation	0.917
Permeability (Minimum) ...	0.0000 md			Lorenz Coefficient	0.967
Water Saturation (Maximum)	100.0 %	Arithmetic Average	2.80 gm/cc	AVERAGE SATURATIONS (Pore Volume):	
Oil Saturation (Minimum) ..	0.0 %	Minimum	2.69 gm/cc	Oil	15.8 %
Grain Density (Minimum) ..	2.00 gm/cc	Maximum	2.88 gm/cc	Water	38.6 %
Grain Density (Maximum) ..	3.00 gm/cc	Median	2.80 gm/cc		
Lithology Excluded	NONE	Standard Deviation	±0.05 gm/cc		



MERIDIAN OIL INC.
 HAVASU FEDERAL NO. 42-24 WELL
 KACHINA FIELD
 SAN JUAN COUNTY, UTAH
 PARADOX (5759-5880 feet)

Page 6

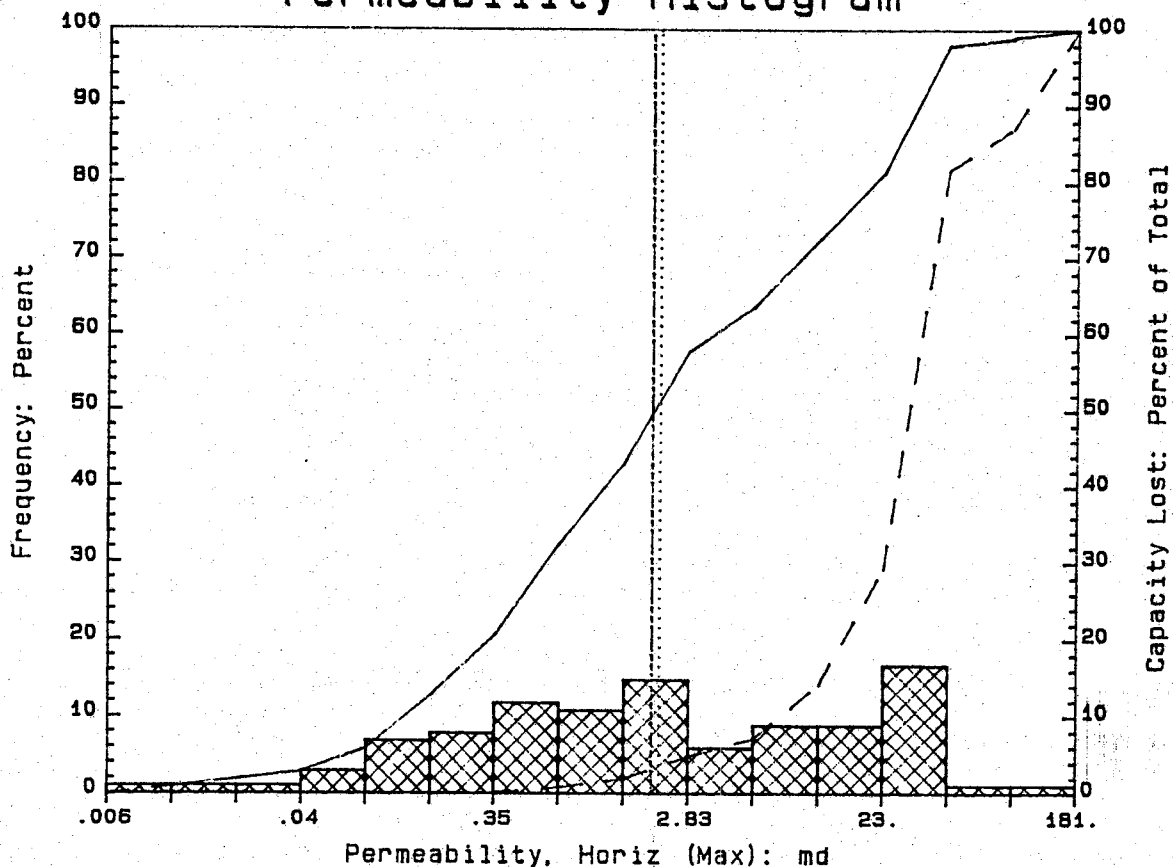
Core Laboratories, Inc.

16-Feb-1987

- LEGEND -

- Median Value (8.8)
- Arith. Average (11.1)
- Cumulative Frequency
- - - - Cumulative Capacity Lost

Permeability Histogram



MERIDIAN OIL INC.
HAVASU FEDERAL NO. 42-24 WELL
KACHINA FIELD
SAN JUAN COUNTY, UTAH
PARADOX (5759-5880 feet)

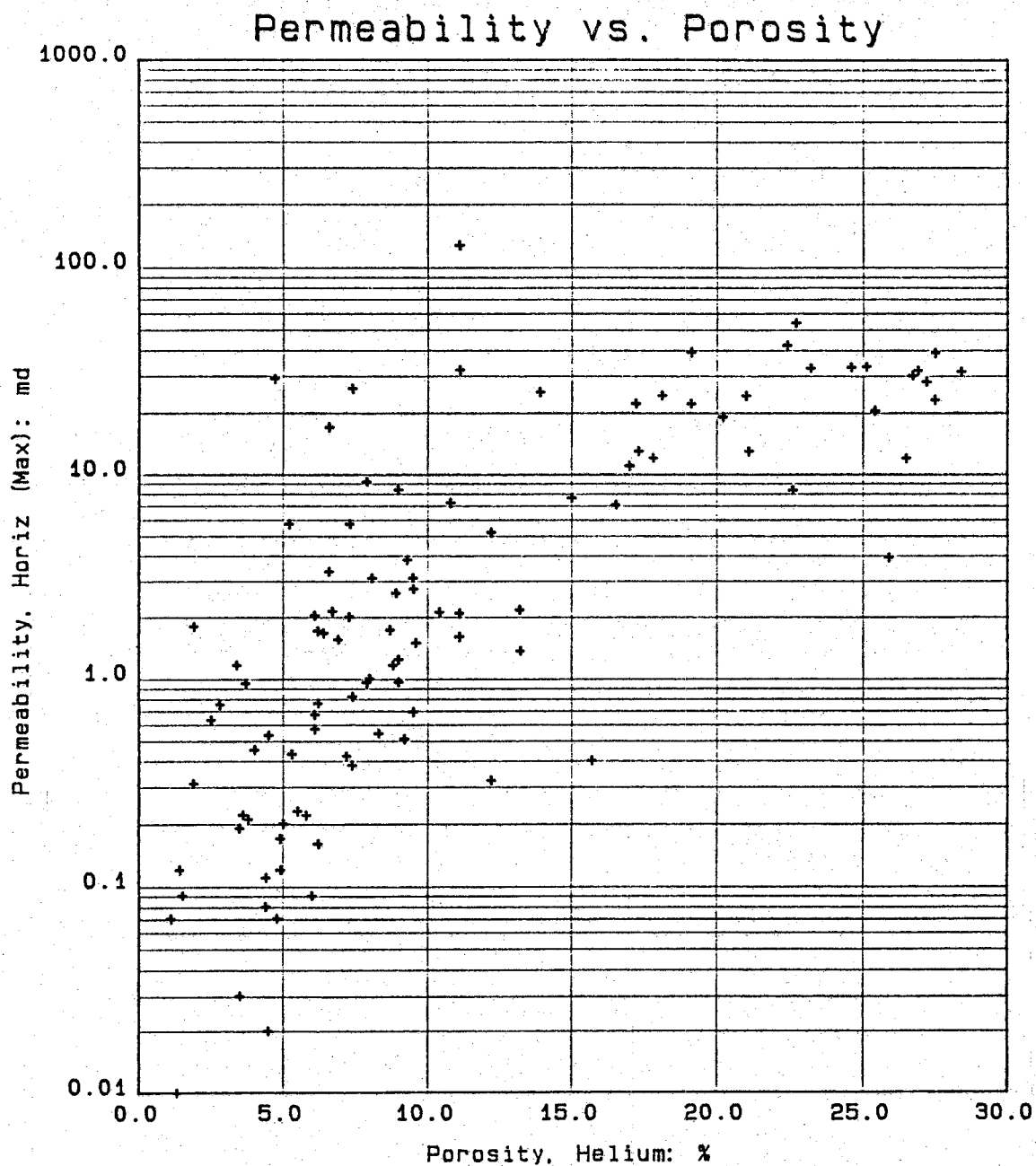
Page 7

Core Laboratories, Inc.

16-Feb-1987

- LEGEND -

- Median Value (1.90)
- Geom. Average (2.05)
- Cumulative Frequency
- - - Cumulative Capacity Lost



MERIDIAN OIL INC.
HAYASU FEDERAL NO. 42-24 WELL
KACHINA FIELD
SAN JUAN COUNTY, UTAH
PARADOX (5759-5880 feet)

Page 8

Core Laboratories, Inc.

16-Feb-1987

- LEGEND -
PARADOX

DISTRIBUTION OF FINAL REPORT -

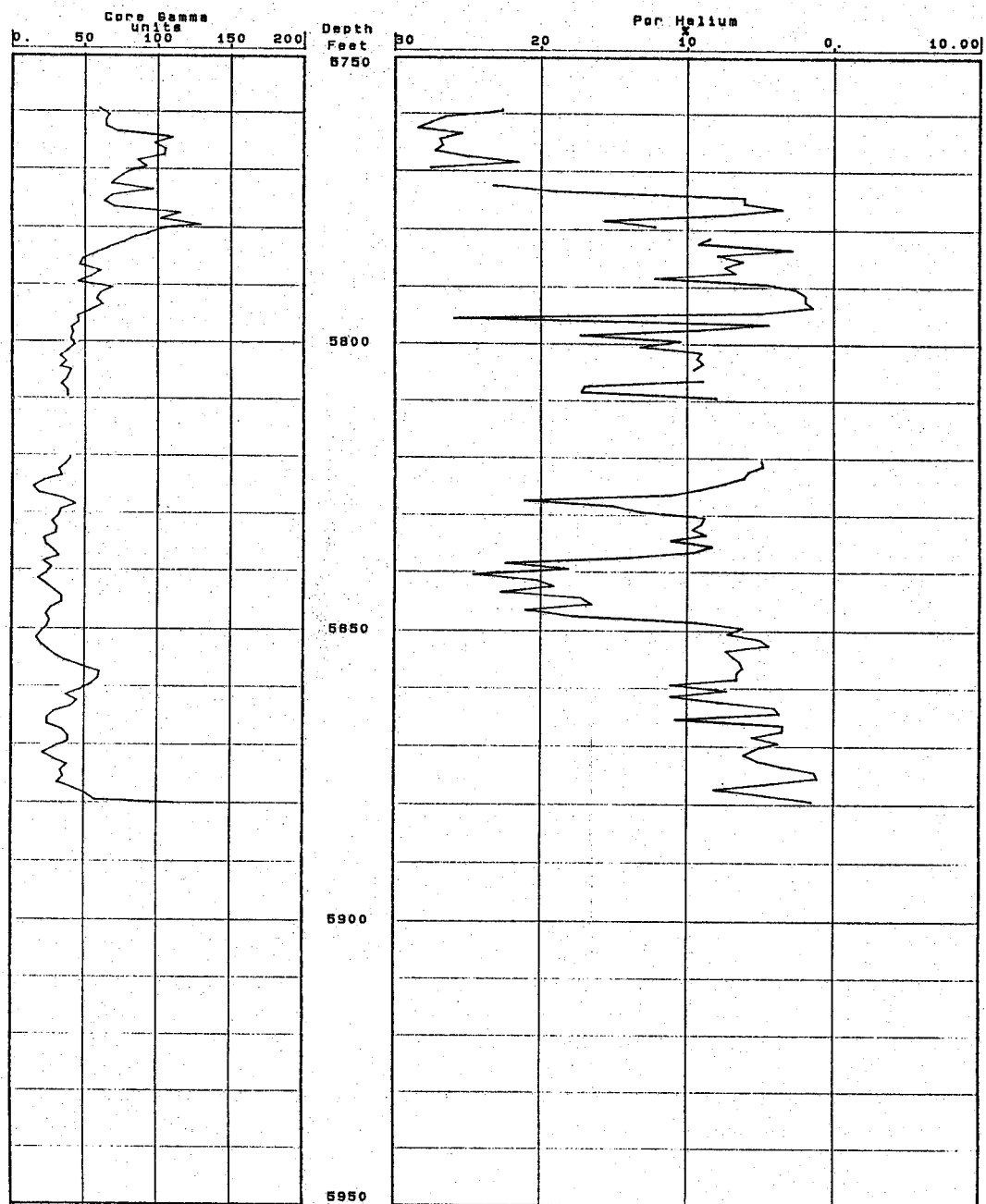
MERIDIAN OIL INC.
Havasu Federal No. 42-24 Well
San Juan County, Utah
CLI File 3402-12837

- 4 cc - MERIDIAN OIL INC.
Attn: Ms. Cindy L. Crawley
5613 DTC Parkway
Englewood, Colorado 80111
- 2 cc - MERIDIAN OIL INC.
Attn: Mr. Johnny Wright
175 North 27th Street
Billings, Montana 59101
- 1 cc - BWAB INCORPORATED
Attn: Mr. Bob Lent
1801 California
#1000 CC4
Denver, Colorado 80202
- 1 cc - TX EAST SKY OIL COMPANY (TESOC)
Attn: Mr. Michael Anderson
1775 Sherman Street
Suite 1200
Denver, Colorado 80203
- 1 cc - TEXAS EASTERN CORPORATION
Attn: Mr. C. E. Fern
P. O. Box 2521
Houston, Texas 77252
- 2 cc - CITIES SERVICES OIL & GAS
Attn: Ms. Jane Barton
P. O. Box 1919
Midland, Texas 79702

MERIDIAN OIL INC.
HAYASU FEDERAL NO. 42-24 WELL
KACHINA FIELD
SAN JUAN COUNTY, UTAH
PARADOX (5759-5880 feet)

Core Laboratories, Inc.

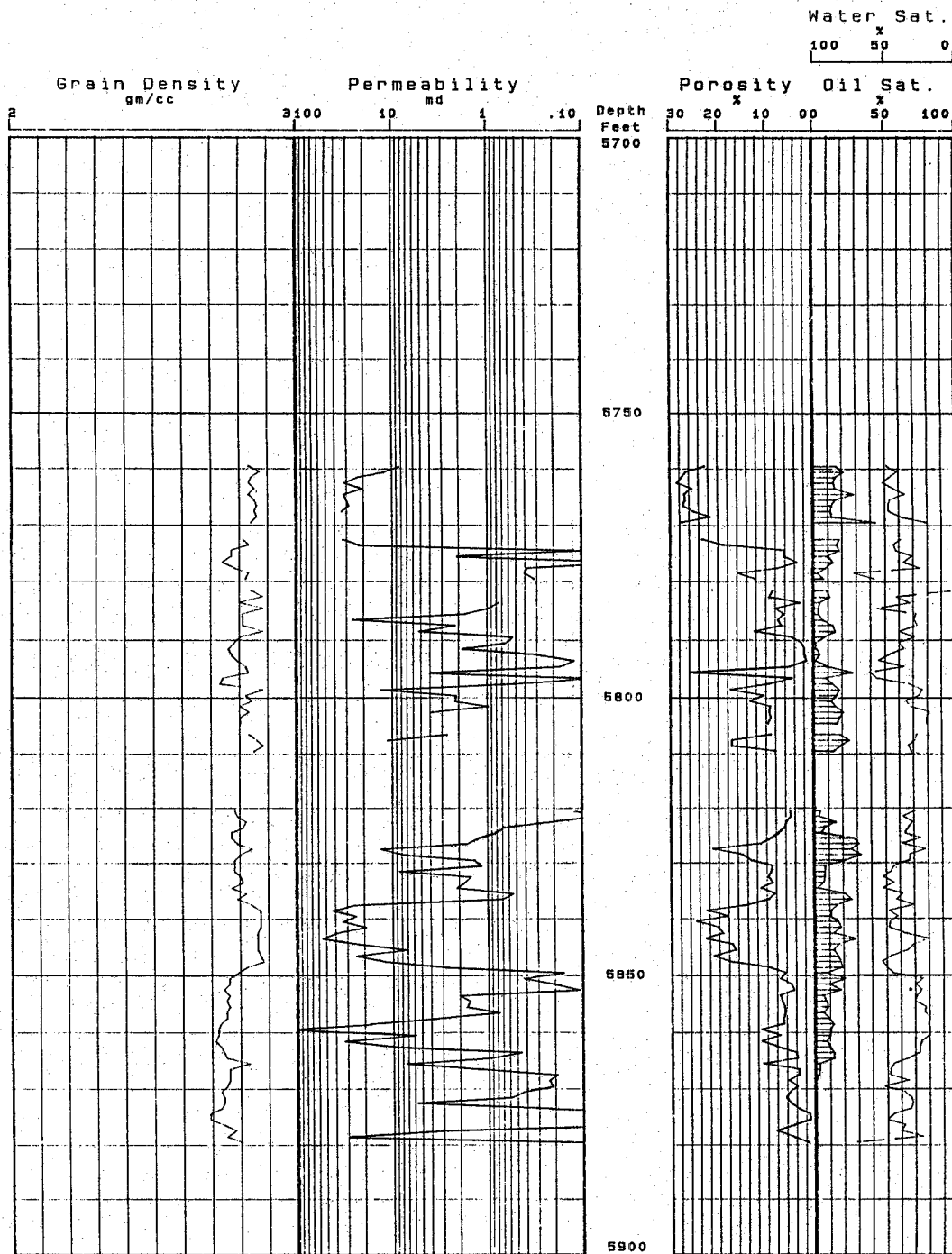
16-Feb-1987



MERIDIAN OIL INC.
HAVASU FEDERAL NO. 42-24 WELL
KACHINA FIELD
SAN JUAN COUNTY, UTAH
PARADOX (5759-5880 feet)

Core Laboratories, Inc.

16-Feb-1987



DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
UTAH STATE OFFICE

3046
R500 MFG 110 10 1984

OIL OR HAZARDOUS SUBSTANCE DISCHARGE

020822

1. Investigation Number _____ Date of Spill 1-24-88 Time _____ (Military)
Spill Notification: By Bob and Allen Roman Date 1-26-88 Time 1030AM
Investigators NONE YET
Investigation Date _____ Time _____ Investigation Time (man/hrs) _____
EPA Notification NA State Division of Health Notification NA

2. Place of spill T385 R33E S24- Hansen Field ALKALI CANYON
Legal Description _____
County SAN JUAN COUNTY Nearest Town BLANDING UT.
Did spill enter a waterway? NA If so, name _____ class _____
Extent of spill 40 BARRELS CRUDE
Type of spill (Region VIII Contingency Plan Definitions) major _____ medium _____
minor X
Responsible Pollutor MERIDIAN Address BILLINGS MONTANA
Contact Person (if known) BILL BROWN Phone Number 406 256 4121

Type of Operation - check one:

Pipeline	_____	Tank Battery	<u>X</u>
Drilling	_____	Transportation	_____
Refinery	_____	List Vehicle	_____
Other	_____		

Type of Oil or Product and Amount:

Gasoline	_____	Crude	<u>X</u>
Kerosene	_____	Other	_____

Cause of spill STUCK TREATER DAMP - ALLOWED OIL TO FLOW INTO FLARE PIT WHERE IT WAS BURNED UP.

3. Draw a simple map showing permanent landmarks and extent of spill on the reverse side of this page.

4. Cleanup Operations: Date of Cleanup Completion _____ Time _____

Methods - check those which apply:

Burning	<u>X</u>	Absorption	_____
Skimming	_____	Burial	_____
Pumping	_____	Other (explain)	_____

Brief summary of cleanup operation (problem, etc.)

There was not much need for clean up since oil was restricted to flare pit and was burned up.

5. Remarks

Will follow up on this when more power is available.

375

23E

Sec. 24

43-037-31279 POW 41-24

43-037-31295 Pl. 11-24 (Cont.)

43-037-31298 POW 42-24

CORE LABORATORIES, INC.
Petroleum Reservoir Engineering

OKLAHOMA CITY, OKLAHOMA

February 24, 1987

REPLY TO
SUITE 133
400 SOUTH VERMONT
OKLAHOMA CITY, OK
73108

Meridian Oil Inc.
5613 DTC Parkway
Englewood, Colorado 80111

Attn: Ms. Cindy L. Crawley

Subject: Core Analysis Data
Havasu Federal No. 42-24
San Juan County, Utah
CLI File 3402-12837

Dear Ms. Crawley:

Cores taken in the subject well in the Paradox formation were received at the Oklahoma City laboratory for special analytical testing described on the Procedure Page.

The accompanying Coregraph presents the Surface Core-Gamma Log and binomially averaged core analysis data in graphical form to aid correlation with downhole electrical surveys.

Tabular presentation of the measured physical properties may be found on pages one through five of this report.

Histograms of porosity and permeability in addition to a graph of permeability versus porosity may be found on pages six through eight.

It is a pleasure to have this opportunity of serving you.

Very truly yours,

CORE LABORATORIES, INC.

Charles A. Devier
Charles A. Devier
Laboratory Manager

CAD:ja

Meridian Oil Inc.
Havasu Federal No. 42-24 Well
CLI File 3402-12837

Procedure Page

Handling and Analytical Procedures

Diamond coring equipment and water base mud were used to obtain 3.5 inch diameter cores between 5,759.0 and 5,880.0 feet.

The cores were preserved in saran, foil and plastic bags by CLI personnel.

The cores were transported to Oklahoma City by motor freight.

A Core-Gamma Log was recorded for downhole electric log correlation.

Core analysis was made on right cylinder full diameter samples.

Fluid removal was accomplished using low temperature extraction.

Porosity was determined by Boyle's law method.

Air permeability in two horizontal directions was measured without Klinkenberg correction.

Temporary storage of cores in Oklahoma City laboratory for a period of thirty days without additional charge.

MERIDIAN OIL INC.

MAR - 2 1987

OPERATIONS/DRILLING

43-037-31298

CORE ANALYSIS REPORT

FOR

MERIDIAN OIL INC.

**HAVASU FEDERAL NO. 42-24 WELL
KACHINA FIELD
SAN JUAN COUNTY, UTAH**

**OPERATIONS DEPT. FILE COPY
DO NOT REMOVE**

These analyses, opinions or interpretations are based on observations and materials supplied by the client to whom; and for whose exclusive and confidential use; this report is made. The interpretations or opinions expressed represent the best judgment of Core Laboratories, Inc. (all errors and omissions excepted); but Core Laboratories, Inc. and its officers and employees, assume no responsibility and make no warranty or representations, as to the productivity, proper operations, or profitability of any oil, gas or other mineral well or formation in connection with which such report is used or relied upon.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN TRIP
(Other instruction
verse side)

Form approved.
Budget Bureau No. 1004-0135
Expires August 31, 1985

5. LEASE DESIGNATION AND SERIAL NO.

U-20895

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

N/A 031001

7. UNIT AGREEMENT NAME

N/A

8. FARM OR LEASE NAME

Havasu-Federal

9. WELL NO.

42-24

10. FIELD AND POOL, OR WILDCAT

Havasu (Wildcat)

11. SEC., T., R., M., OR BLK. AND
SURVEY OR AREA

Section 24-38S-23E

12. COUNTY OR PARISH 13. STATE

San Juan Utah

SUNDRY NOTICES AND REPORTS ON WELLS
(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir.
Use "APPLICATION FOR PERMIT—" for such proposals.)

1. OIL WELL ☒ GAS WELL ☐ OTHER ☐

2. NAME OF OPERATOR
MERIDIAN OIL INC.

3. ADDRESS OF OPERATOR
P. O. Box 1855, Billings, MT 59103

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*
See also space 17 below.)
At surface

SENE (1970' FNL - 461' FEL)

14. PERMIT NO.

43-03-31298

15. ELEVATIONS (Show whether DF, RT, GR, etc.)

5122' KB

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:

TEST WATER SHUT-OFF ☐

FRACTURE TREAT ☐

SHOOT OR ACIDIZE ☐

REPAIR WELL ☐

(Other) ☐

PULL OR ALTER CASING ☐

MULTIPLE COMPLETE ☐

ABANDON* ☐

CHANGE PLANS ☐

SUBSEQUENT REPORT OF:

WATER SHUT-OFF ☐

FRACTURE TREATMENT ☐

SHOOTING OR ACIDIZING ☐

(Other) Put on Production ☒

REPAIRING WELL ☐

ALTERING CASING ☐

ABANDONMENT* ☐

(NOTE: Report results of multiple completion on Well
Completion or Recompletion Report and Log form.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

Date of first sales - 3-2-87 (test oil)

Well started flowing @ 10:00 AM 3-3-87 into permanent facilities.

CONFIDENTIAL INFORMATION

RECEIVED
MAR 06 1987

DIVISION OF
OIL, GAS & MINING

18. I hereby certify that the foregoing is true and correct

SIGNED

Suzanne Nelson

TITLE Sr. Operations Technician

DATE 3/4/87

(This space for Federal or State office use)

APPROVED BY

TITLE

DATE

CONDITIONS OF APPROVAL, IF ANY:

*See Instructions on Reverse Side

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS, AND MINING

SUBMIT IN TRIPLICATE
 (Other instructions on reverse side)

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir.
 Use "APPLICATION FOR PERMIT—" for such proposals.)

1. <input checked="" type="checkbox"/> OIL WELL <input type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER 2. NAME OF OPERATOR MERIDIAN OIL INC. 3. ADDRESS OF OPERATOR P. O. Box 1855, Billings, MT 59103 4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements. See also space 17 below.) At surface SENE (1970' FNL - 461' FEL)		5. LEASE DESIGNATION AND SERIAL NO. U-20895 6. IF INDIAN, ALLOTTEE OR TRIBE NAME N/A 7. UNIT AGREEMENT NAME N/A 8. FARM OR LEASE NAME Havasus-Federal 9. WELL NO. 42-24 10. FIELD AND POOL, OR WILDCAT Havasus (Wildcat) 11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA Section 24-38S-23E 12. COUNTY OR PARISH San Juan 13. STATE Utah
14. PERMIT NO. 43-03-31298	15. ELEVATIONS (Show whether OF, RT, OR, etc.) 522' KB	

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:

TEST WATER SHUT-OFF <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> SHOOT OR ACIDIZE <input type="checkbox"/> REPAIR WELL <input type="checkbox"/> (Other) <u>Flare Gas</u>	PULL OR ALTER CASING <input type="checkbox"/> MULTIPLE COMPLETE <input type="checkbox"/> ABANDON* <input type="checkbox"/> CHANGE PLANS <input checked="" type="checkbox"/>
--	--

SUBSEQUENT REPORT OF:

WATER SHUT-OFF <input type="checkbox"/> FRACTURE TREATMENT <input type="checkbox"/> SHOOTING OR ACIDIZING <input type="checkbox"/> (Other) _____	REPAIRING WELL <input type="checkbox"/> ALTERING CASING <input type="checkbox"/> ABANDONMENT* <input type="checkbox"/>
---	--

(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)

The subject well is currently in the production testing phase of completion. The results of the State required 3-day stabilized GOR test are presented below:

72 hour flow test: 1913 BO, 38 BW, 1509 MCF, 36/64" choke
 Average: 638 BOPD, 13 BWPD, 503 MCFPD, GOR: 788 SCF/STB, FTP 262 psi

Meridian Oil Inc. requests approval to flare gas in excess of 100 MCFPD for a period not to exceed 45 days from March 2, 1987. This approval is contingent upon concurrent approval from the Bureau of Land Management in Moab, Utah. An extended length pressure build-up test is planned subsequent to all production testing to determine critical reservoir characteristics in this portion of the field.

18. I hereby certify that the foregoing is true and correct

SIGNED Daniel Soderstrom

TITLE Petroleum Engineer

DATE 3/9/87

(This space for Federal or State office use)

APPROVED BY _____
 CONDITIONS OF APPROVAL, IF ANY:

TITLE _____

**APPROVED BY THE STATE
 OF UTAH DIVISION OF
 OIL, GAS, AND MINING**

DATE: 3-12-87

BY: John R. Bay

Federal approval of this action is required before commencing operations.

*See Instructions on Reverse Side

Meridian Oil Inc.
Well No. Havasu Federal 42-24
Sec. 24, T. 38 S., R. 23 E.
San Juan County, Utah
Lease U-20895

We cannot approve flaring as proposed. However, flaring for testing purposes will be approved under the following conditions.


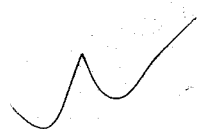
CONDITION OF APPROVAL ON APD AS FOLLOWS

Operator will not flare more than 50 MMCF total gas volume from the subject well during the first 30 days of active production.

CONDITION AFTER FLARING APPROVAL ON APD EXPIRES

After 30 days and/or 50 MMCF gas volume flared or vented, operator will produce well such that no more than 3000 MCF per month total gas volume from this well is flared or vented.

This restriction will be valid for one year or until a gas sales connection is available.





STATE OF UTAH
NATURAL RESOURCES
Oil, Gas & Mining

Norman H. Bangerter, Governor
Dee C. Hansen, Executive Director
Dianne R. Nielson, Ph.D., Division Director

355 W. North Temple • 3 Triad Center • Suite 350 • Salt Lake City, UT 84180-1203 • 801-538-5340

032015

March 16, 1987

Meridian Oil Inc.
P. O. Box 1855
Billings, MT 59103

Gentlemen:

RE: Request to Flare or Vent Associated Gas for Havasu-Federal
Well No. 42-24, Section 24, Township 38S, Range 23E,
San Juan County, Utah

The Division of Oil, Gas and Mining hereby grants approval of your sundry notice dated March 9, 1987, to flare associated gas from the above referenced well. The approval is limited to the conditions stated in the notice, specifically that the associated gas may be flared or vented in excess of that allowed by Rule 311.3 of the Oil and Gas Conservation General Rules for a period not to exceed 45 days from March 2, 1987.

Please note that this approval represents an administrative variance to Rule 311.3. The Division will inform the Board of Oil, Gas and Mining of the approval at the next regularly scheduled meeting to be held on March 26, 1987, during the informal briefing session. No Board action will be required at this time. Any additional request for flaring beyond that stated in your sundry notice will require concurrence or approval of the Board.

It is also necessary to comply with federal regulations and the federal lease requirements concerning oil and gas operations. Therefore, you are advised to contact the appropriate federal agency and ensure that they do not object to the proposed gas flaring.

Please contact this office again if you have any further questions.

Best regards,

Dianne R. Nielson
Director

cc: R. J. Firth
J. R. Baza
Well file ✓
0258T-109

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN TRIPLY
(Other instructions on
reverse side)

Form approved.
Budget Bureau No. 1004-0135
Expires August 31, 1985

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir.
Use "APPLICATION FOR PERMIT—" for such proposals.)

1. OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <input type="checkbox"/>	5. LEASE DESIGNATION AND SERIAL NO. U-20895
2. NAME OF OPERATOR MERIDIAN OIL INC.	6. IF INDIAN, ALLOTTEE OR TRIBE NAME N/A
3. ADDRESS OF OPERATOR P. O. Box 1855, Billings, MT 59103	7. UNIT AGREEMENT NAME N/A
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements. See also space 17 below.) At surface SENE (1970' FNL - 461' FEL)	8. FARM OR LEASE NAME Havasu-Federal
14. PERMIT NO. 43-03-31298	9. WELL NO. 42-24
15. ELEVATIONS (Show whether DF, RT, GR, etc.) 5122' KB	10. FIELD AND POOL, OR WILDCAT Havasu (Wildcat)
	11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA Section 24-38S-23E
	12. COUNTY OR PARISH San Juan
	13. STATE Utah

Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
TEST WATER SHUT-OFF	<input type="checkbox"/>	WATER SHUT-OFF	<input type="checkbox"/>
FRACTURE TREAT	<input type="checkbox"/>	FRACTURE TREATMENT	<input type="checkbox"/>
SHOOT OR ACIDIZE	<input type="checkbox"/>	SHOOTING OR ACIDIZING	<input type="checkbox"/>
REPAIR WELL	<input type="checkbox"/>	(Other)	<input type="checkbox"/>
(Other)	Flare Gas	(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)	
PULL OR ALTER CASING	<input type="checkbox"/>	REPAIRING WELL	<input type="checkbox"/>
MULTIPLE COMPLETE	<input type="checkbox"/>	ALTERING CASING	<input type="checkbox"/>
ABANDON*	<input type="checkbox"/>	ABANDONMENT*	<input type="checkbox"/>
CHANGE PLANS	<input checked="" type="checkbox"/>		

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.) *

The subject well is currently in the production testing phase of completion. The results of a 72 hour stabilized flow test are presented below:

72 hour flow test: 1913 BO, 38 BW, 1509 MCF, 36/64" choke
Average: 638 BOPD, 13 BWPD, 503 MCFPD, GOR: 788 SCF/STB,
FTP 262 psi

Meridian Oil Inc. requests approval to flare gas in excess of 100 MCFPD for a period not to exceed 60 days or 100 MMCF cumulative production from March 2, 1987. An extended length pressure build-up test is planned subsequent to all production testing to determine critical reservoir characteristics in this portion of the field.

18. I hereby certify that the foregoing is true and correct

SIGNED Daniel Loderato TITLE Petroleum Engineer DATE 3/9/87

(This space for Federal or State office use)

APPROVED BY Dave Malone TITLE District Manager DATE 3/12/87

CONDITIONS OF APPROVAL, IF ANY:

CONDITIONS OF APPROVAL ATTACHED

*See Instructions on Reverse Side

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN DUPLICATE*
(See other instructions on reverse side)

Form approved.
Budget Bureau No. 1004-0138
Expires August 31, 1985

WELL COMPLETION OR RECOMPLETION REPORT AND LOG *

1a. TYPE OF WELL: OIL WELL ☒ GAS WELL ☐ DRY ☐ Other ☐

b. TYPE OF COMPLETION: NEW WELL ☒ WORK OVER ☐ DEEP-EN ☐ PLUG BACK ☐ DIFF. RESVR. ☐ Other ☐

2. NAME OF OPERATOR

MERIDIAN OIL INC.

3. ADDRESS OF OPERATOR

P. O. Box 1855, Billings, MT 59103

4. LOCATION OF WELL (Report location clearly and in accordance with State requirements)

At surface SENE (1970' FNL - 461' FEL)

At top prod. interval reported below Same

At total depth Same

DIVISION OF
OIL, GAS & MINING

14. PERMIT NO.
43-03-31298

DATE ISSUED

12. COUNTY OR PARISH
San Juan

13. STATE
Utah

15. DATE SPUDDED 1-15-87 16. DATE T.D. REACHED 1-27-87 17. DATE COMPL. (Ready to prod.) 3-3-87 18. ELEVATIONS (DF, RKB, RT, GR, ETC.)* 5133' GL 19. ELEV. CASINGHEAD 5122' KB

20. TOTAL DEPTH, MD & TVD 6118' 21. PLUG, BACK T.D., MD & TVD 6022' 22. IF MULTIPLE COMPL., HOW MANY* N/A 23. INTERVALS DRILLED BY N/A 24. ROTARY TOOLS X 25. CABLE TOOLS

24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)* 5759' - 5849' (U. Ismay) 25. WAS DIRECTIONAL SURVEY MADE No

26. TYPE ELECTRIC AND OTHER LOGS RUN

1-15-88 DEL/MSFL, FDI/CNL, Sonic, Dipmeter

CONFIDENTIAL INFORMATION

27. WAS WELL CORED Yes

28. CASING RECORD (Report all strings set in well)

CASING SIZE	WEIGHT, LB./FT.	DEPTH SET (MD)	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
13-3/8	61#	76'	17-1/2	100 SX	None
8-5/8	24#	1906'	11	480 SX	None
5-1/2	17#	6117'	7-7/8	650 SX	None

29. LINER RECORD

SIZE	TOP (MD)	BOTTOM (MD)	SACKS CEMENT*	SCREEN (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)
N/A					2-7/8	5731'	5700'

31. PERFORATION RECORD (Interval, size and number)

5837' - 5849' w/4 jspf, 4" HSC, 90° phsg
5827' - 5831' w/4 jspf, 4" HSC, 90° phsg
5816' - 5820' w/4 jspf, 4" HSC, 90° phsg
5797' - 5810' w/4 jspf, 4" HSC, 90° phsg
5781' - 5791' w/4 jspf, 4" HSC, 90° phsg
5759' - 5774' w/4 jspf, 4" HSC, 90° phsg

32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.

DEPTH INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED
5837' - 5849'	1500 gal 15% Hcl
5816' - 5831'	1000 gal 15% Hcl
5997' - 5810'	1625 gal 15% Hcl
5781' - 5791'	1250 gal 15% Hcl

33.* PRODUCTION 5759' - 5774' 1875 gal 15% Hcl
DATE FIRST PRODUCTION 3-3-87 PRODUCTION METHOD (Flowing, gas lift, pumping—size and type of pump) Flowing WELL STATUS (Producing or shut-in) Producing

DATE OF TEST	HOURS TESTED	CHOKE SIZE	PROD'N. FOR TEST PERIOD	OIL—BBL.	GAS—MCF.	WATER—BBL.	GAS-OIL RATIO
3-29-87	24	40/64	→	481.60	519	11.45	1077:1
FLOW. TUBING PRESS.	CASING PRESSURE	CALCULATED 24-HOUR RATE	OIL—BBL.	GAS—MCF.	WATER—BBL.	OIL GRAVITY-API (CORR.)	
281	-	→	481.60	519	11.45	39.5° @ 60°F	

34. DISPOSITION OF GAS (Sold, used for fuel, vented, etc.)

Flaring

TEST WITNESSED BY

Dave Overgaard

35. LIST OF ATTACHMENTS

36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records

SIGNED

B. A. Imster

TITLE Sr. Drilling Engineer

DATE 3/30/87

*(See Instructions and Spaces for Additional Data on Reverse Side)

37. SUMMARY OF POROUS ZONES: (Show all important zones of porosity and contents thereof; cored intervals; and all drill-stem, tests, including depth interval tested; cushion used, flowing and shut-in pressures, and recoveries):

FORMATION	TOP	BOTTOM	DESCRIPTION, CONTENTS, ETC.
			N/A

38. GEOLOGIC MARKERS

NAME	TOP	
	MEAS. DEPTH	TRUE VERT. DEPTH
Entrada	778'	
Navajo	960'	
Chinle	1965'	
Shinarump	2900'	
Cutter	3030'	
Fermosa	4760'	
Ismay	5726'	
"A" Shale	5881'	
L. Ismay	5898'	
Gothic	5950'	
Desert Creek	5989'	
Chimney Rock	6061'	
Akah	6084'	

CONFIDENTIAL INFORMATION

COMPANY: MERIDIAN

UT ACCOUNT # N7230 SUSPENSE DATE: _____

WELL NAME: HAUASU Fed 42-24

TELEPHONE CONTACT DOCUMENTATION

API #: 4303731298

CONTACT NAME: NANCY

SEC, TWP, RNG: 24 38S 23E

CONTACT TELEPHONE NO.: 1-406-256-4123

SUBJECT: NEED MAIN LOGS - RECEIVED OTHERS

DLL/SM5L

FDL/CNL

SONIC

~~B~~ DIPMETER

(Use attachments if necessary)

RESULTS: NANCY WILL REQUEST LOGS BE SENT.

(Use attachments if necessary)

CONTACTED BY: VC

DATE: 1-11-87

MERIDIAN OIL

RECEIVED
JAN 15 1988

DIVISION OF
OIL, GAS & MINING

TRANSMITTAL LETTER
RECORD OF SHIPMENT OF CONFIDENTIAL INFORMATION

TO: Utah Dept. of Natural Resources FROM: C. L. Crawley
Division of Oil, Gas and Mining Name
355 W. North Temple Sr. Staff Geologist
3 Triad Center, Suite 350 Title
Salt Lake City, Utah 84180-1203 DATE: January 12, 1988
Attn: Cynthia Brandt VIA: Mail

QUANTITY	DESCRIPTION
	Havasu Federal 42-24
1	B.H.C. Sonic Log ✓
1	Compensated Density - Compensated Neutron Log ✓
1	Dual Laterolog ✓
1	Computed Dipmeter ✓

INSTRUCTIONS: Please acknowledge receipt promptly by signing and returning the copy.

RECEIVED BY: Vicky Carney DATE: 1-14-88

COMPANY: MERIDIAN UT ACCOUNT # N7230 SUSPENSE DATE: _____

WELL NAME: HAVASA FED 42-24

API #: 43 037 31298

SEC, TWP, RNG: 24 38 S 23 E

TELEPHONE CONTACT DOCUMENTATION

CONTACT NAME: BILL BROWN PORT

CONTACT TELEPHONE NO.: 1-406-256-4123

SUBJECT: NEED CORE REPORT

(Use attachments if necessary)

RESULTS: BILL WILL CALL BACK 9:05 2-11-88

~~MRS NELSON~~ SUSANNE NELSON

WILL SEND COPY OF CORE REPORT

(Use attachments if necessary)

CONTACTED BY: VC

DATE: 2-11-88 10:00

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN TRIPLICATE*
(Other instructions on re-
verse side)

Form approved.
Budget Bureau No. 1004-0135
Expires August 31, 1985

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug wells to a different reservoir.
Use "APPLICATION FOR PERMIT—" for such proposals.)

1. OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <input type="checkbox"/>		5. LEASE DESIGNATION AND SERIAL NO. U-20895 <i>pow/ISmy</i>	
2. NAME OF OPERATOR MERIDIAN OIL INC		6. IF INDIAN, ALLOTTEE OR TRIBE NAME N/A 030204	
3. ADDRESS OF OPERATOR P. O. Box 1855, Billings, MT 59103		7. UNIT AGREEMENT NAME N/A	
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.) At surface SENE (1970' FNL - 461' FEL)		8. FARM OR LEASE NAME Havasu-Federal	
14. PERMIT NO. 43-037-31298		9. WELL NO. 42-24	
15. ELEVATIONS (Show whether DP, RT, GR, etc.) 5122' KB		10. FIELD AND POOL, OR WILDCAT Kachina	
		11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA Section 24-38S-23E	
		12. COUNTY OR PARISH San Juan	
		13. STATE Utah	

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
TEST WATER SHUT-OFF <input type="checkbox"/>	PULL OR ALTER CASING <input type="checkbox"/>	WATER SHUT-OFF <input type="checkbox"/>	REPAIRING WELL <input type="checkbox"/>
FRACTURE TREAT <input type="checkbox"/>	MULTIPLE COMPLETE <input type="checkbox"/>	FRACTURE TREATMENT <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
SHOOT OR ACIDIZE <input type="checkbox"/>	ABANDON* <input type="checkbox"/>	SHOOTING OR ACIDIZING <input type="checkbox"/>	ABANDONMENT* <input type="checkbox"/>
REPAIR WELL <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>	(Other) <u>First Gas Sales</u> <input checked="" type="checkbox"/>	
(Other) <input type="checkbox"/>		(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)	

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

Notice of First Gas Sales - February 18, 1988.

I hereby certify that the foregoing is true and correct

SIGNED W. H. Brown TITLE Production Superintendent DATE 2/22/88

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

*See Instructions on Reverse Side

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN TRIPLICATE*
(Other instructions on re-
verse side)

Form approved.
Budget Bureau No. 1004-0135
Expires August 31, 1985

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir.
Use "APPLICATION FOR PERMIT—" for such proposals.)

1. OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <input type="checkbox"/>		5. LEASE DESIGNATION AND SERIAL NO. U-20895	
2. NAME OF OPERATOR MERIDIAN OIL INC.		6. IF INDIAN, ALLOTTEE OR TRIBE NAME N/A	
3. ADDRESS OF OPERATOR P. O. Box 1855, Billings, MT 59103		7. UNIT AGREEMENT NAME N/A	
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements. See also space 17 below.) At surface NENE (1050' FNL - 500' FEL)		8. FARM OR LEASE NAME Havasus-Federal	
14. PERMIT NO. 43-037/31279/31298		9. WELL NO. 41-24 and 42-24	
15. ELEVATIONS (Show whether DP, RT, GR, etc.) 5118' KB		10. FIELD AND POOL, OR WILDCAT Kachina	
		11. SEC., T., R., M., OR BLM. AND SURVEY OR AREA Section 24-38S-23E	
		12. COUNTY OR PARISH San Juan	13. STATE Utah

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
TEST WATER SHUT-OFF	<input type="checkbox"/>	WATER SHUT-OFF	<input type="checkbox"/>
FRACTURE TREAT	<input type="checkbox"/>	FRAC TREATMENT	<input type="checkbox"/>
SHOOT OR ACIDIZE	<input type="checkbox"/>	SHOOTING OR ACIDIZING	<input type="checkbox"/>
REPAIR WELL	<input type="checkbox"/>	(Other) NTL-2B	<input checked="" type="checkbox"/>
(Other)	<input type="checkbox"/>	(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)	

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.) *

Production Facility:

- A. Operator: Meridian Oil Inc.
- B. Well Names: 41-24 and 42-24
- C. Location: NENE Section 24-38S-23E
San Juan County, Utah
- D. Lease/CA No.: U-20895
- E. Produced Water: 4 BWPD (120 BWPM) Battery production.
- F. Water Analysis: Enclosed
- G. Produced water stored in tank until trucked.

Disposal Facility:

- A. Operator: Hay Hot Oil
- B. Name: Disposal Pit
- C. Location: SESE Section 14-40S-22E
- D. Hauler: Hay Hot Oil Inc.

I hereby certify that the foregoing is true and correct

SIGNED [Signature]

TITLE Production Superintendent

DATE 4/11/88

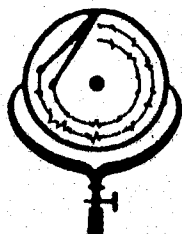
(This space for Federal or State office use)

APPROVED BY _____
CONDITIONS OF APPROVAL, IF ANY:

TITLE _____

DATE _____

*See Instructions on Reverse Side



Precision Service, Inc.

BOX 3659 Ph. 307/237-9327
CASPER, WYOMING

BOX 1596 Ph. 701/225-6021
DICKINSON, NORTH DAKOTA

RECEIVED
APR 13 1988

DIVISION OF
OIL, GAS & MINING

WATER ANALYSIS REPORT

OPERATOR Meridian Oil Co.
WELL NO. #41-24
FIELD Kiva
COUNTY San Juan
STATE Utah

DATE 11/25/86 LAB NO. 3137-5
LOCATION _____
FORMATION _____
INTERVAL _____
SAMPLE FROM _____

REMARKS & CONCLUSIONS: Yellow brown water, oil on top, Yellow brown filtrate.

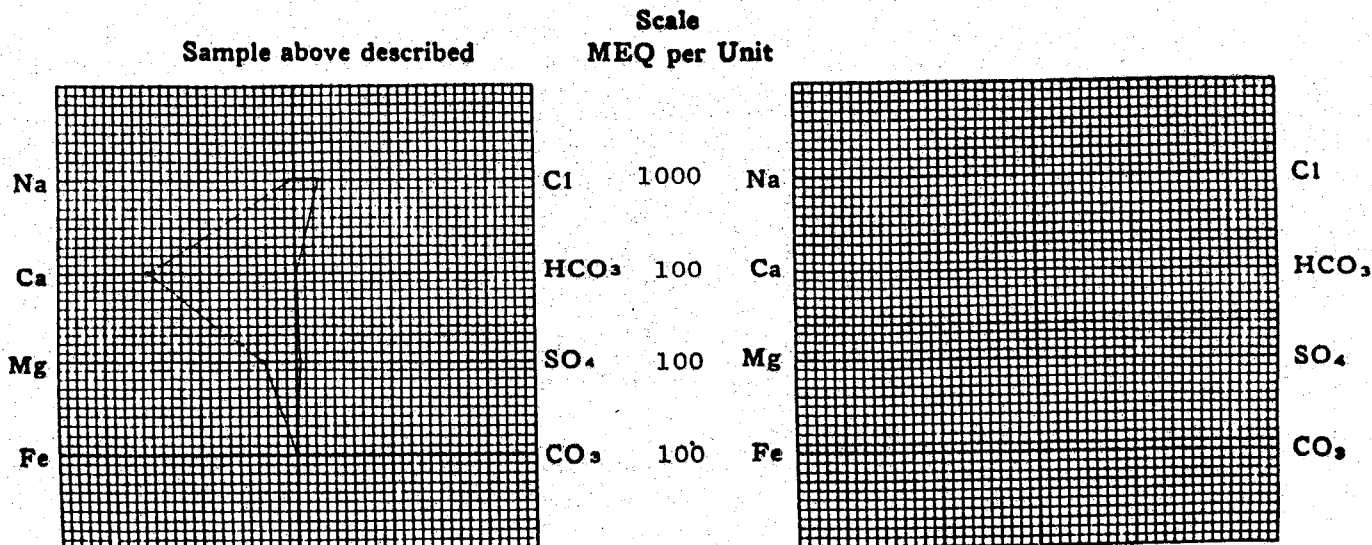
Cations	mg/l	meq/l	Anions	mg/l	meq/l
Sodium . . (Calc)	14,274	620.90	Sulfate	1,164	24.21
Potassium	--	--	Chloride	89,180	2514.88
Lithium	--	--	Carbonate	0	--
Calcium	31,262	1559.97	Bicarbonate	171	2.80
Magnesium	4,392	361.02	Hydroxide	--	--
Iron	present	--	Hydrogen sulfide	--	--
Total Cations		2541.89	Total Anions		2541.89

Total dissolved solids, mg/l 140,443
NaCl equivalent, mg/l 142,565
Observed pH 5.80

Specific resistance @ 68°F.:
Observed 0.076 ohm-meters
Calculated 0.069 ohm-meters

Observed R.W. in error due to Iron & Magnesium content.

WATER ANALYSIS PATTERN



(Na value in above graphs includes Na, K, and Li)
NOTE: Mg/l=Milligrams per liter Meq/l= Milligram equivalents per liter
Sodium chloride equivalent=by Dunlap & Hawthorne calculation from components

UNICHEM INTERNATIONAL

707 NORTH LEECH

P.O. BOX 1499

HOBBS, NEW MEXICO 88240

RECEIVED
APR 13 1988

COMPANY : MERIDIAN OIL & GAS
DATE : 03-26-87
FIELD, LEASE & WELL : HAVASU
SAMPLING POINT : #42-24; SEPARATOR
DATE SAMPLED : 03-20-87

SPECIFIC GRAVITY = 1.07
TOTAL DISSOLVED SOLIDS = 107146
PH = 4.3

DIVISION OF
OIL, GAS & MINING

		ME/L	MG/L
CATIONS			
CALCIUM	(CA)+2	556	11142.
MAGNESIUM	(MG)+2	232	2820.
SODIUM	(NA), CALC.	1134.	26079.
ANIONS			
BICARBONATE	(HCO3)-1	0	0
CARBONATE	(CO3)-2	0	0
HYDROXIDE	(OH)-1	0	0
SULFATE	(SO4)-2	22.3	1075
CHLORIDES	(CL)-1	1900	66000
DISSOLVED GASES			
CARBON DIOXIDE	(CO2)	NOT RUN	
HYDROGEN SULFIDE	(H2S)	NOT RUN	
OXYGEN	(O2)	NOT RUN	
IRON(TOTAL)	(FE)		303
BARIUM	(BA)+2	.43	29.6
MANGANESE	(MN)	NOT RUN	

IONIC STRENGTH (MOLAL) = 2.483

SCALING INDEX	TEMP	
	30C	48.8C
	86F	120F
CARBONATE INDEX	-3.4	-2.9
CALCIUM CARBONATE SCALING	UNLIKELY	UNLIKELY
CALCIUM SULFATE INDEX	1.23	1.04
CALCIUM SULFATE SCALING	LIKELY	LIKELY

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN TRIPLICATE*
(Other instructions on reverse side)

Form approved.
Budget Bureau No. 100-1-0135
Expires August 31, 1985

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir.
Use "APPLICATION FOR PERMIT-1" for such proposals.)

5. LEASE DESIGNATION AND SERIAL NO.

U-20895

6. IF INDIAN ALLOTTEE OR TRIBE NAME

N/A

7. UNIT AGREEMENT NAME

N/A

DIVISION OF
OIL-GAS & MINING

1. OIL WELL ☒ GAS WELL ☐ OTHER ☐

2. NAME OF OPERATOR

MERIDIAN OIL INC.

3. ADDRESS OF OPERATOR

P. O. Box 1855, Billings, MT 59103

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*

See also space 17 below.)
At surface

NENE (1050' FNL - 500' FEL)

8. FARM OR LEASE NAME

Havasu-Federal

9. WELL NO.

41-24 and 42-24

10. FIELD AND POOL, OR WILDCAT

Kachina

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA

SEC 04, T 38S, R 03E

14. PERMIT NO.

43-037-31279/31298

15. ELEVATIONS (Show whether DF, RT, GR, etc.)

5118' KB

12. COUNTY OR PARISH

San Juan

13. STATE

Utah

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:

SUBSEQUENT REPORT OF:

TEST WATER SHUT-OFF ☐

PULL OR ALTER CASING ☐

WATER SHUT-OFF ☐

REPAIRING WELL ☐

FRACTURE TREAT ☐

MULTIPLE COMPLETE ☐

FRACTURE TREATMENT ☐

ALTERING CASING ☐

SHOOT OR ACIDIZE ☐

ABANDON* ☐

SHOOTING OR ACIDIZING ☐

ABANDONMENT* ☐

REPAIR WELL ☐

CHANGE PLANS ☐

(Other) ☐

NTL-4A ☒

(Other) ☐

(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

Permission to flare gas on an emergency basis, is requested for the above named facility. All gas is being sold to Western Gas Processors at the present time, with no flaring of gas. Approval of this request would cover unforeseen instances of high line pressure or equipment malfunction. A 72 hr time period is suggested.

18. I hereby certify that the foregoing is true and correct

SIGNED

W. H. Brance

TITLE Production Superintendent

DATE 4/27/88

(This space for Federal or State office use)

APPROVED BY

TITLE

DATE

CONDITIONS OF APPROVAL, IF ANY:

*See Instructions on Reverse Side



STATE OF UTAH
NATURAL RESOURCES
Oil, Gas & Mining

Well files

Norman H. Bangerter, Governor
Dee C. Hansen, Executive Director
Dianne R. Nielson, Ph.D., Division Director

355 W. North Temple • 3 Triad Center • Suite 350 • Salt Lake City, UT 84180-1203 • 801-538-5340

June 6, 1988

Meridian Oil Inc.
P.O. Box 1855
Billings, Montana 59103

Gentlemen:

Re: Request for Gas Venting or Flaring Approval

The Division of Oil, Gas And Mining has received several sundry notices requesting standing approval for emergency gas venting or flaring for the following wells in San Juan County:

Havasus Federal #22-19, Sec. 19, T. 38S, R. 24E
Havasus Federal #41-24, Sec. 24, T. 38S, R. 24E
Havasus Federal #42-24, Sec. 24, T. 38S, R. 24E 23E
Cherokee Federal #11-14, Sec. 14, T. 37S, R. 23E
Cherokee Federal #22-14, Sec. 14, T. 37S, R. 23E
Cherokee Federal #33-14, Sec. 14, T. 37S, R. 23E
Cherokee Federal #43-14, Sec. 14, T. 37S, R. 23E

Your request was reviewed with Board of Oil, Gas and Mining during the informal briefing session of their May 26, 1988 Board meeting.

The Board determined that your request for standing approval to vent or flare gas from the subject wells on an emergency basis shall not be granted. It was the opinion of the Board that in cases of emergency venting or flaring, you must immediately notify the Division and properly report the volumes and duration of any such venting or flaring. The Division shall review all emergency venting or flaring of gas to ensure that such action is unavoidable and adheres to principles of proper conservation.

In this situation, the Board has granted the Division administrative authority to allow gas venting or flaring from the subject wells for verifiable emergencies. If, in the opinion of the Division staff, any reported venting or flaring is not justified, the Division will inform the Board and further action may be taken in accordance with the rules and orders of the Board.

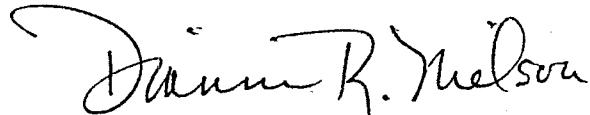
Page 2
Meridian Oil Inc.
June 6, 1988

The factors which the Division may consider in reviewing emergency gas venting or flaring are:

1. The disruption of gas transportation and the reasons for such disruption.
2. The ability of Meridian to restrict production as long as correlative rights are protected and without causing waste.
3. The potential for any other conservation oriented alternative to gas venting or flaring.

If you have any further questions concerning this action, please contact John Baza at the letterhead address and telephone number. Thank you for your consideration in this matter.

Best regards,



Dianne R. Nielson
Director

JRB
cc: R. J. Firth
Well files
0458T-50-51

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN TRIPPLICATE*
(Other instructions on re-
verse side)

Form approved.
Budget Bureau No. 1004-0135
Expires August 31, 1985

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir.
Use "APPLICATION FOR PERMIT-1" for such proposals.)

1. OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <input type="checkbox"/>		5. LEASE DESIGNATION AND SERIAL NO. U-20895
2. NAME OF OPERATOR Meridian Oil Inc.		6. IF INDIAN, ALLOTTEE OR TRIBE NAME N/A
3. ADDRESS OF OPERATOR P.O. Box 1855, Billings, MT 59103		7. UNIT AGREEMENT NAME N/A
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements. See also space 17 below.) At surface NENE (1050' FNL - 500' FEL)		8. FARM OR LEASE NAME Havasu-Federal
14. PERMIT NO. 43-037-31298		9. WELL NO. 42-24
15. ELEVATIONS (Show whether DP, RT, OR, etc.) 5118' KB		10. FIELD AND POOL, OR WILDCAT Kachina
		11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA Sec 24-38S-23E
		12. COUNTY OR PARISH San Juan
		13. STATE Utah

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
TEST WATER SHUT-OFF <input type="checkbox"/>	PULL OR ALTER CASING <input type="checkbox"/>	WATER SHUT-OFF <input type="checkbox"/>	REPAIRING WELL <input type="checkbox"/>
FRACTURE TREAT <input type="checkbox"/>	MULTIPLE COMPLETE <input type="checkbox"/>	FRACTURE TREATMENT <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
SHOOT OR ACIDIZE <input type="checkbox"/>	ABANDON* <input type="checkbox"/>	SHOOTING OR ACIDIZING <input type="checkbox"/>	ABANDONMENT* <input type="checkbox"/>
REPAIR WELL <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>	(Other) <u>Install Pmpg Unit</u> <input checked="" type="checkbox"/>	

(Other) Install Pmpg Unit ☒
(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.) *

Well SI 6-6-88. Installed 2-1/2" x 1-1/2" x 20' pump w/diptube. Well put back on production @ 4:30 P.M. 6-7-88.

OIL AND GAS	
DRN	RJF
JRB	GLH
DTS	SLS
1-TAS	
2- MICROFILM <input checked="" type="checkbox"/>	
3- FILE	

18. I hereby certify that the foregoing is true and correct

SIGNED Ron Schuyler TITLE Senior Production Engineer DATE 6-20-88

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY: _____

*See Instructions on Reverse Side

August 3, 1988
Billings, Montana

CONVERT TO WIW
42-24 Havasu Federal
Kachina Field
San Juan County, Utah

Pertinent Data:

Location: SENE (1970' FNL, 461' FEL) Sec. 24, T38S, R23E
Elevations: 5113' GL, 5125' KB

TD: 6118'
PBTD: 6022'

Perforations: 5759'-74', 5781'-91', 5797'-5810', 5816'-20', 5827'-31',
5837'-49' (Ismay)
Present Status: Pumping 121 BOPD + 445 MCFD + 4 BWPD

Surface Casing: 8-5/8", 24#/ft J-55 set @ 1906'. Cemented with 360 sx Class
"G" with 16% gel and 3% salt, followed by 120 sx Class "B"
with 2% CaCl₂.

Production Casing

<u>Jts.</u>	<u>Description</u>	<u>Length</u>	<u>Depth to Top</u> <u>KB</u>
140	5-1/2" 17# J-55 ST&C	5752.50	(-9.46)
1	5-1/2" 17# J-55 ST&C	40.35	5743.04
6	5-1/2" 17# J-55 ST&C	247.21	5783.39
	Gemco Diff. Fill Float	2.00	6030.60
2	5-1/2" 17# J-55 ST&C	82.40	6032.60
	Dowell Guide Shoe	2.00	6115.00
			6117.00

Cement: 650 sx Class "B" Lite cement followed by 162 sx Class "B" with
3% KCl.

Tubing Detail (Run 6/6/88)

<u>Jts.</u>	<u>Description</u>	<u>Length</u>	<u>Depth to Top</u> <u>KB</u>
188	2-7/8", 6.5#, J-55 EUE 8rd	5681.54	5693.54
2	2-7/8", 6.5#, J-55, EUE 8rd subs	12.18	5705.72
	Tubing Anchor Catcher	3.10	5768.82
6	2-7/8", 6.5#, J-55, EUE 8rd	191.10	5899.92
	Seating Nipple	1.10	5901.02
1	2-7/8" Perforated Sub	3.10	5904.12
1	2-7/8", 6.5#, J-55, EUE 8rd	32.50	5936.62
	Bull Plug	0.50	5937.12

Rod Data:

(1) 7/8" x 6' pony, (86) 7/8" x 25' rods with scrapers, (124) 3/4" x 25' rods, (24) 1" x 25' rods, 2-1/2" x 1-1/2" x 20' RHBC with 21' dip tube. Polish rod 1-1/2" x 26'.

Procedure:

- 1) MIRU service unit.
- 2) POOH w/rods and pump.
- 3) NU BOP, release anchor and POOH.
- 4) PU and RIH with 4-3/4" bit and 5-1/2" casing scraper to PBTD. Circulate down backside with hot oil followed by hot produced water. Displace oil back through flowline to treater and fill flowline with water. POOH.
- 5) PU & RIH with Baker inverted lok-set Model 45A4 packer, one jt 2-7/8" tbg, Baker "R" nipple (2.250" ID, 2.197" No-Go) on 2-7/8" tbg (change out all tubing collars to AB modified). Hydrotest tubing in hole (test all connections for at least 1 to 2 minutes for small leaks!). Circulate annulus with packer fluid (90 bbls treated injected water from Kiva mixed with 40¹⁶ gals corrosion inhibitor) and set packer at 5700'±. Test annulus to 2500 psi.
- 6) Nipple down BOP and set wellhead.
- 7) Rig down & move out. Wait on completion of injection facilities.
- 8) Upon completion of facilities, place well on injection in the Upper Ismay perfs at approximately 1200 BWPD with a maximum wellhead pressure of 3700 psi.

Prepared by:

RE Schuyler

R. E. Schuyler, Senior Production Engineer

8-4-88

(date)

Approved:

TC Lechner

T. C. Lechner, Regional Production Engineer

8-18-88

(date)

Approved:

John Pulley

John Pulley, Completion Superintendent

8-4-88

(date)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN TRIPLICATE*
(Other instructions on re-
verse side)

Form approved.
Budget Bureau No. 1004-0135
Expires August 31, 1985

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different formation.
Use "APPLICATION FOR PERMIT—" for

1. OIL <input checked="" type="checkbox"/> WELL GAS <input type="checkbox"/> WELL OTHER <input type="checkbox"/>		7. UNIT AGREEMENT NAME Kachina	
2. NAME OF OPERATOR MERIDIAN OIL INC.		8. FARM OR LEASE NAME Havasut-Federal	
3. ADDRESS OF OPERATOR P. O. Box 1855, Billings, MT 59103		9. WELL NO. 42-24	
4. LOCATION OF WELL (Report location clearly and in accordance with any BLM regulations. See also space 17 below.) At surface NENE (1050' FNL - 500' FEL)		10. FIELD AND POOL, OR WILDCAT Kachina	
11. SEC., T., R., M., OR BLK. AND SUBVY OR AREA Section 24-38S-23E		12. COUNTY OR PARISH San Juan	
13. ELEVATIONS (Show whether DF, WT, GR, etc.) 5118' KB		14. STATE Utah	
15. PERMIT NO. 43-037-31298		16. DIVISION OF OIL, GAS & MINING	

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
TEST WATER SHUT-OFF <input type="checkbox"/>	PULL OR ALTER CASING <input type="checkbox"/>	WATER SHUT-OFF <input type="checkbox"/>	REPAIRING WELL <input type="checkbox"/>
FRACTURE TREAT <input type="checkbox"/>	MULTIPLE COMPLETE <input type="checkbox"/>	FRACTURE TREATMENT <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
SHOOT OR ACIDIZE <input type="checkbox"/>	ABANDON* <input type="checkbox"/>	SHOOTING OR ACIDIZING <input type="checkbox"/>	ABANDONMENT* <input type="checkbox"/>
REPAIR WELL <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>	(Other) <input type="checkbox"/>	(Other) <input type="checkbox"/>
(Other) Convert to Water Injection <input checked="" type="checkbox"/>		(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)	

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.) *

Meridian Oil Inc. proposes to convert subject well to a water injection well as per attached procedure.

18. I hereby certify that the foregoing is true and correct

SIGNED W. L. Brauer TITLE Production Superintendent DATE 9/12/88

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

*See Instructions on Reverse Side

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN TRIPLICATE*
(Other instructions on re-
verse side)

Form approved.
Budget Bureau No. 1004-0135
Expires August 31, 1985

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir.
Use "APPLICATION FOR PERMIT—" for such proposals.)

1. OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <input type="checkbox"/>		5. LEASE DESIGNATION AND SERIAL NO. U-20895	
2. NAME OF OPERATOR MERIDIAN OIL INC.		6. IF INDIAN, ALLOTTEE OR TRIBE NAME N/A	
3. ADDRESS OF OPERATOR P. O. Box 1855, Billings, MT 59103		7. UNIT AGREEMENT NAME	
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.) At surface SENE (1970' FNL - 461' FEL)		8. FARM OR LEASE NAME Havasu-Federal	
14. PERMIT NO. 43-037-31298		9. WELL NO. 42-24	
15. ELEVATIONS (Show whether DF, RT, OR, etc.) 5122' KB		10. FIELD AND POOL, OR WILDCAT Kachina	
		11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA Section 24, T38S, R23E	
		12. COUNTY OR PARISH San Juan	13. STATE Utah

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
TEST WATER SHUT-OFF <input type="checkbox"/>	PULL OR ALTER CASING <input type="checkbox"/>	WATER SHUT-OFF <input type="checkbox"/>	REPAIRING WELL <input type="checkbox"/>
FRACTURE TREAT <input type="checkbox"/>	MULTIPLE COMPLETE <input type="checkbox"/>	FRACTURE TREATMENT <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
SHOOT OR ACIDIZE <input type="checkbox"/>	ABANDON* <input type="checkbox"/>	SHOOTING OR ACIDIZING <input type="checkbox"/>	ABANDONMENT* <input type="checkbox"/>
REPAIR WELL <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>	(Other) <input type="checkbox"/>	(Other) <input type="checkbox"/>
(Other) Shut Well In <input checked="" type="checkbox"/>		(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)	

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

Well will be shut in effective August 8, 1988 awaiting completion of waterflood facilities. Tentative date of return to production December 1, 1988.

18. I hereby certify that the foregoing is true and correct

SIGNED W. A. Brown TITLE Production Superintendent DATE 8/5/88

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE _____
CONDITIONS OF APPROVAL, IF ANY:

BLM (3), UOGC (3)

*See Instructions on Reverse Side

11-7-98

SRB

Cement Calculations:

Well No. 22-19

$$1. \text{ Vol. between } 5\frac{1}{2}" \text{ csg \& } 7\frac{7}{8}" \text{ hole} = 0.1733 \text{ ft}^3/\text{ft.}$$

$$\text{Typical slurry volume (assuming Class G w/ 2\% bentonite)} \\ = 1.34 \text{ ft}^3/\text{sx}$$

$$\text{Cement pumped} = 900 \text{ sx} \times 1.34 \text{ ft}^3/\text{sx}$$

$$= 1,206 \text{ ft}^3 \\ (50\% \text{ exc.}) \longrightarrow 1,206 \div 1.5 = 804 \text{ ft}^3$$

$$\text{Height of cement column} = 1,206 \div 0.1733 \\ = 6,959'$$

$$(50\% \text{ exc.}) \longrightarrow 4,639'$$

It is likely that cement top on $5\frac{1}{2}"$ casing overlaps setting depth of $8\frac{5}{8}"$ casing.

$$2. \text{ Vol between } 8\frac{5}{8}" \text{ casing \& } 11" \text{ hole} = 0.2542 \text{ ft}^3/\text{ft.}$$

$$\text{Cement pumped} = 440 \text{ sx} \times 1.34 \text{ ft}^3/\text{sx}$$

$$= 590 \text{ ft}^3$$

$$(50\% \text{ exc.}) \longrightarrow 393 \text{ ft}^3$$

$$\text{Height of cement column} = 590 \div 0.2542 \\ = 2,321'$$

$$(50\% \text{ exc.}) \longrightarrow 1,546'$$

It is likely that cement top on $8\frac{5}{8}"$ casing is back to surface.

Arabian Fed. Well No. 3

$$1. \text{ Vol. between } 5\frac{1}{2}" \text{ csg. \& } 7\frac{7}{8}" \text{ hole} = 0.1733 \text{ ft}^3/\text{ft.}$$

$$\begin{aligned} \text{Cement pumped} &= 375 \text{ sx} \times 1.34 \text{ ft}^3/\text{sx} \\ &= 503 \text{ ft}^3 \end{aligned}$$

$$(50\% \text{ exc.}) \implies 335 \text{ ft}^3$$

$$\begin{aligned} \text{Height of cement column} &= 503 \div 0.1733 \\ &= 2,902' \end{aligned}$$

$$(50\% \text{ exc.}) \implies 1,933'$$

The cement top probably exists at a depth of 4,000' - 4,150'.

$$2. \text{ Vol. between } 8\frac{3}{8}" \text{ csg. \& } 12\frac{1}{4}" \text{ hole} = 0.4127 \text{ ft}^3/\text{ft.}$$

$$\begin{aligned} \text{Cement pumped} &= 1125 \text{ sx} \times 1.34 \text{ ft}^3/\text{sx} \\ &= 1508 \text{ ft}^3 \end{aligned}$$

$$(50\% \text{ exc.}) \implies 1,005 \text{ ft}^3$$

$$\begin{aligned} \text{Height of cement column} &= 1508 \div 0.4127 \\ &= 3,654' \end{aligned}$$

$$(50\% \text{ exc.}) \implies 2,435'$$

The cement top is at surface.

42-24
42-24

MERIDIAN OIL

October 10, 1988

RECEIVED
OCT 12 1988

DIVISION OF
OIL, GAS & MINING

State of Utah
Division of Oil, Gas & Mining
355 West North Temple
3 Triad Center, Suite 350
Salt Lake City, UT 84180-1203

RE: Request for approval for three Class II water injection wells for the Kachina Unit Waterflood, San Juan County, Utah.

Dear Sirs:

Please find enclosed the information required by Rule R615-5-2 as directed by your letter of September 21, 1988. We are requesting approval to inject water into the Ismay formation in the Kachina Unit (located in Section 24, T38S, R23E and Section 19, T38S, R24E) for the purpose of increasing the ultimate oil recovery. We plan to drill one new well (11-19 Havasu Federal) and convert two existing wells (42-24 Havasu Federal and the Abrabian Federal #2) to water injectors. The information required is as follows:

R615-5-2.0: Form DOGM-UIC-1 (Attachment 1, 2 & 3)

- 2.1: A plat showing the location of the injection wells (Attachment 4).
- 2.2: Copies of all logs run on the injection wells. The logs of the two existing wells (42-24 and ABO #2) are on file with the state and the logs of the new well (11-19) will be filed when they are run after the well is drilled.
- 2.3: Copies of the cement bond logs on the injection wells. Bond logs of the existing wells are on file and the new well will be logged and filed with the State when the well is drilled.
- 2.5: Description of the casing and proposed method for testing the casing before use as an injection well.

42-24 Havasu Federal (existing well)

Surface casing: 8-5/8" 24# J-55 set @ 1906'.
Cemented to surface.

Production casing: 5-1/2" 17# J-55 set @ 6117'.
Cemented with 650 sxs Class "B" with 16% gel followed
by 162 sxs Class "B" cement.

Arabian Federal #2 (existing well)

Surface casing: 8-5/8" 24# J-55 set @ 1954'.
Cemented to surface.

Production casing: 5-1/2" 15.5# J-55 set @ 6095'.
Cemented with 350 sxs Class "H" cement.

11-19 Havasu Federal (proposed well)

Surface casing: 8-5/8" 24# K-55 set @ 1900'.
Cemented to surface.

Production casing: 5-1/2" 15.5# K-55 set @ 5950'.
Cemented with 365 sxs Class "B" with 16% gel followed
by 100 sxs Class "B" cement.

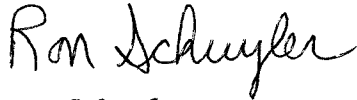
The casing in all wells will be pressure tested to
2500 psi prior to starting injection into the Ismay
formation.

- 2.6 The water to be used for injection in these wells will be produced from the Cutler and Wingate formations in the Wash Unit #2 well located SESE Section 13, T39S, R23E. We will attempt to produce approximately 6000 BWP/D from this well and inject a maximum of 2000 BWP/D per injection well.
- 2.7 The recompletion of the proposed water source well (Wash Unit #2) has not been completed at this time. The proposed water source formations and the injection zone are the same as our existing waterflood in the Kiva Field located in Sections 4, 5, & 9, T39S, R25E. Upon completion of the water source well, we will sample the source well and submit this information to you.
- 2.8 The proposed maximum injection pressure will be 3750 psi and average injection pressure will be 3700 psi.
- 2.9 After the two existing proposed injection wells are converted to injectors, we will run a step-rate test on each well to determine the fracture gradient in the area. This information will be forwarded to you as soon as possible.
- 2.10 Water injection in the Kachina waterflood will be into Upper Ismay zone of the Pennsylvanian Paradox formation. Kachina is a NWSE trending carbonate stratigraphic trap which is approximately 1 mile long and 1/2 mile wide. It is bounded on all sides and overlain by an impermeable anhydrite. The reservoir is underlain by the Hovenweep Shale. Maximum net thickness is 132' at an average depth of 5800'.

- 2.11 There are (5) existing wells in the Kachina Field which penetrate the Ismay reservoir. The minimum amount of cement used in any of these wells was 350 sxs in the Arabian Federal #2. This amount of cement would cover over 3000' above the Ismay formation and should be more than enough to mechanically isolate the reservoir from any possible migration outside the casing string.
- 2.12 Affidavit certifying that a copy of this application has been provided to all operators, owners, and surface owners within a 1/2 miles radius of the proposed injection wells (Attachment 5).

If you has any questions or require additional data regarding the proposed Kachina waterflood, please call me at (406)-256-4030. Thank you for your prompt attention to our application.

Sincerely,



Ron Schuyler
Senior Production Engineer

Attachments

RES/njl

UTAH
NATURAL RESOURCES
OIL, GAS AND MINING

3 Triad Center, Suite 350, Salt Lake City, UT 84180-1203

Ph. (801)538-5340

APPLICATION FOR INJECTION WELL

Operator: Meridian Oil Inc. Telephone: (406)-256-4000

Address: P.O. Box 1855

City: Billings State: MT Zip: 59103

Well no.: 11-19 Havasu Federal Field or Unit name: Kachina Unit

Sec.: 19 Twp.: 38S Rng.: 24E County: San Juan Lease no. U-56188

	<u>YES</u>	<u>NO</u>
Is this application for expansion of an existing project?.....	<u> </u>	<u>X</u>
Will the proposed well be used for: Enhanced recovery?.....	<u>X</u>	<u> </u>
Disposal?.....	<u> </u>	<u>X</u>
Storage?.....	<u> </u>	<u>X</u>
Is this application for a new well to be drilled?.....	<u>X</u>	<u> </u>
Has a casing test been performed for an existing well?.....	<u> </u>	<u>X</u>
(If yes, date of test: <u> </u>)		

Injection Interval: from 5750 (est) to 5850 (est)

Maximum Injection: rate 2000 (est) pressure 3700 psig

Injection zone contains X oil, gas or fresh water within 1/2 mile.

Additional information as required by R615-5-2 should accompany this form.

I hereby certify that the foregoing is true and correct to the best of my knowledge:

Signed: Ronald E. Schuyler Title: Senior Production Engineer Date: 9-29-88

(This space for DOGM approval)

Approved by: _____ Title: _____ Date: _____

UTAH
NATURAL RESOURCES
OIL, GAS AND MINING

3 Triad Center, Suite 350, Salt Lake City, UT 84180-1203

Ph. (801)538-5340

APPLICATION FOR INJECTION WELL

43-037-31298

Operator: Meridian Oil Inc. Telephone: (406)-256-4000Address: P.O. Box 1855City: Billings State: MT Zip: 59103Well no.: 42-24 Havasu Federal Field or Unit name: Kachina UnitSec.: 24 Twp.: 38S Rng.: 23E County: San Juan Lease no. U-20895

	<u>YES</u>	<u>NO</u>
Is this application for expansion of an existing project?.....		<u>X</u>
Will the proposed well be used for: Enhanced recovery?.....	<u>X</u>	
Disposal?.....		<u>X</u>
Storage?.....		<u>X</u>
Is this application for a new well to be drilled?.....		<u>X</u>
Has a casing test been performed for an existing well?.....		<u>X</u>
(If yes, date of test: _____)		

Injection interval: from 5759 to 5849Maximum injection: rate 2000 (est) pressure 3700 psigInjection zone contains X oil, _____ gas or _____ fresh water within 1/2 mile.

Additional information as required by R615-5-2 should accompany this form.

I hereby certify that the foregoing is true and correct to the best of my knowledge:

Signed: Ronald E Schuyler Title: Senior Production Engineer Date: 9-29-88

(This space for DOGM approval)

Approved by: _____ Title: _____ Date: _____

UTAH
NATURAL RESOURCES
OIL, GAS AND MINING

3 Triad Center, Suite 350, Salt Lake City, UT 84180-1203

Ph. (801)538-5340

APPLICATION FOR INJECTION WELLOperator: Meridian Oil Inc. Telephone: (406)-256-4000Address: P.O. Box 1855City: Billings State: MT Zip: 59103

43-037-31282

Well no.: Arabian Federal No. 2 Field or Unit name: Kachina UnitSec.: 19 Twp.: 38S Rng.: 24E County: San Juan Lease no. U-56188

	<u>YES</u>	<u>NO</u>
Is this application for expansion of an existing project?.....		<u>X</u>
Will the proposed well be used for: Enhanced recovery?.....	<u>X</u>	
Disposal?.....		<u>X</u>
Storage?.....		<u>X</u>
Is this application for a new well to be drilled?.....		<u>X</u>
Has a casing test been performed for an existing well?.....		<u>X</u>
(If yes, date of test: _____)		

Injection interval: from 5723 to 5789Maximum injection: rate 2000 (est) pressure 3700 psigInjection zone contains X oil, _____ gas or _____ fresh water within 1/2 mile.

Additional information as required by R615-5-2 should accompany this form.

I hereby certify that the foregoing is true and correct to the best of my knowledge:

Signed: Ronald E Schuyler Title: Senior Production Engineer Date: 9-29-88

(This space for DOGM approval)

Approved by: _____ Title: _____ Date: _____

R 23 E

R 24 E

13
13-34

Wash Unit #2

24

41-24

11-19

42-24

12-19

22-19

12-19A

120

100

80

60

#2

#3

T
38
S

PROPOSED UNIT BOUNDARY

KACHINA FIELD

SAN JUAN COUNTY, UTAH

▽ Proposed Injector

○ Proposed Producer

1544



I, Suzann S. Nelson do hereby certify that the following owners/operators have been sent certified copies of the Request for Approval for three (3) Class II Water Injection wells for the Kachina Unit Waterflood in San Juan County, Utah.

Maurice W. Brown
614 Greeley Highway
Cheyenne, WY 82007

Peggy A. Yates
c/o ABO Petroleum Corporation
105 South Fourth Street
Artesia, NM 88210

BWAB 1984-1986 Joint Venture
1801 California
Suite 1000
Denver, CO 80202

Union Pacific Resources Co.
P.O. Box 1257
Englewood, CO 80150

Samedan Oil Corporation
2550 Security Life Building
1616 Glenarm Place
Denver, CO 80202

OXY USA, INC.
P.O. Box 1919
Midland, TX 79702

Wintershall Petroleum Corporation
5251 DTC Parkway
Suite 500
Englewood, CO 80111

Raymond T. Duncan
1777 South Harrison Street
Penthouse 1
Denver, CO 80210

Comdisco Resources, Inc.
c/o Raymond T. Duncan
1777 S. Harrison Street
Penthouse 1
Denver, CO 80210

Hartwell Corporation 83
5941 S. Middleton Road
Suite 103
Littleton, CO 80123

Tenneco Oil Company
P.O. Box 3249
Englewood, CO 80155

Duncan Exploration
1777 South Harrison Street
Penthouse 1
Denver, CO 80210

Texaco Producing Inc.
P.O. Box 2100
Denver, CO 80201

Chorney Oil Company
Suite 1000
555 Seventeenth
Denver, CO 80202-3910

William C. Armor, Jr.
3422 South Energy Lane
Casper, WY 82604

Synergy Exploration Inc.
1777 S. Harrison
Penthouse 1
Denver, CO 80210

Richard C. Perkins
184 North 100 West (16-4)
Blanding, UT 84511

United States of America
Bureau of Land Management
Utah State Office
Suite 301
324 South State Street
Salt Lake City, UT 84111

ABO Petroleum Corporation
105 South Fourth Street
Artesia, NM 88210

Western Gas Processors
Suite 609
10701 Melody Drive
Denver, CO 80234

Notary Seal

Notary Public *Gregory D. Nelson*
State of Montana
County of Yellowstone
My Commission expires 2-28-90

UIC CHECKLIST FOR APPLICATION APPROVAL

received 10/12/88

OPERATOR Meridian Oil WELL NUMBER HAVASU Federal 42-24
 SEC. 24 T. 38S R. 23E COUNTY San Juan
 API # 43-037-31298

NEW WELL _____ DISPOSAL WELL _____ ENHANCED RECOVERY WELL ✓

- | | | |
|----------------------------------|--------------|--------------------------------|
| - Plat showing surface ownership | Yes _____ | No <u>✓</u> |
| - Application forms complete | Yes <u>✓</u> | No _____ |
| - Schematic of well bore | Yes <u>*</u> | No <u>see back</u>
<u>✓</u> |
| - Adequate geologic information | Yes <u>✓</u> | No _____ |
| - Rate and Pressure information | Yes <u>✓</u> | No _____ |
| - Fluid source | Yes _____ | No <u>✓</u> |
| - Analysis of formation fluid | Yes _____ | No <u>✓</u> |
| - Analysis of injection fluid | Yes _____ | No <u>✓</u> |
| - USDW information | Yes _____ | No <u>✓</u> |
| - Mechanical integrity test | Yes _____ | No _____ |

Comments: Injection interval 5750'-5850'

rate 2000, pressure 3700 - Ismay (PRDx)

Sample from water well will be sent after completion

Ismay analysis will be sent

Wells in area of review 2 producers, 1 proposed injector

+ 1 SI producer to be converted to water supply (Already drilled)

Received by [Signature] 10/17/88

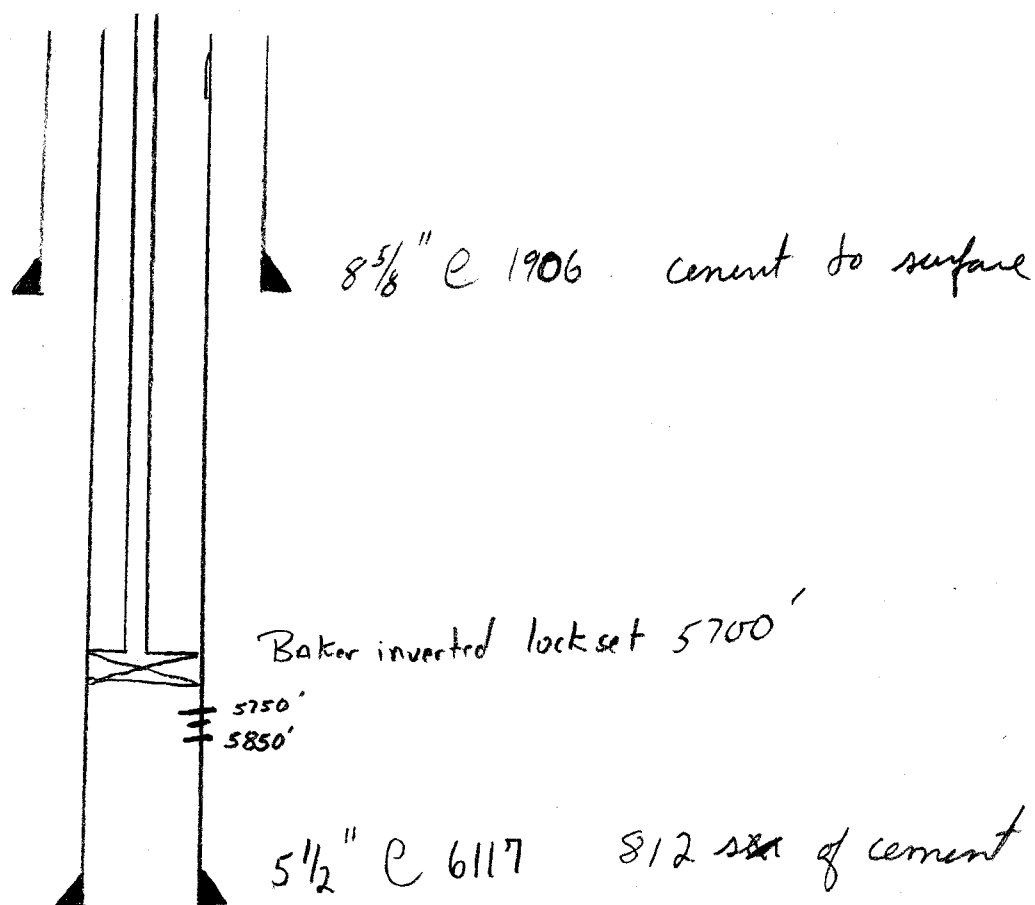
There will be
two additional
producers and
1 injector drilled
(over)

① An Analysis of formation water will be sent as per phone conversation with Ron Schylor of Meridian on 10/17/88

② An analysis of water from the water supply well will be submitted when that well is converted.

③ A step rate test will be done to determine frac gradient.

④ Pressure test when well is converted.



Operator

Meridian Oil

Well

42-24, 11-19 & Arabian #2

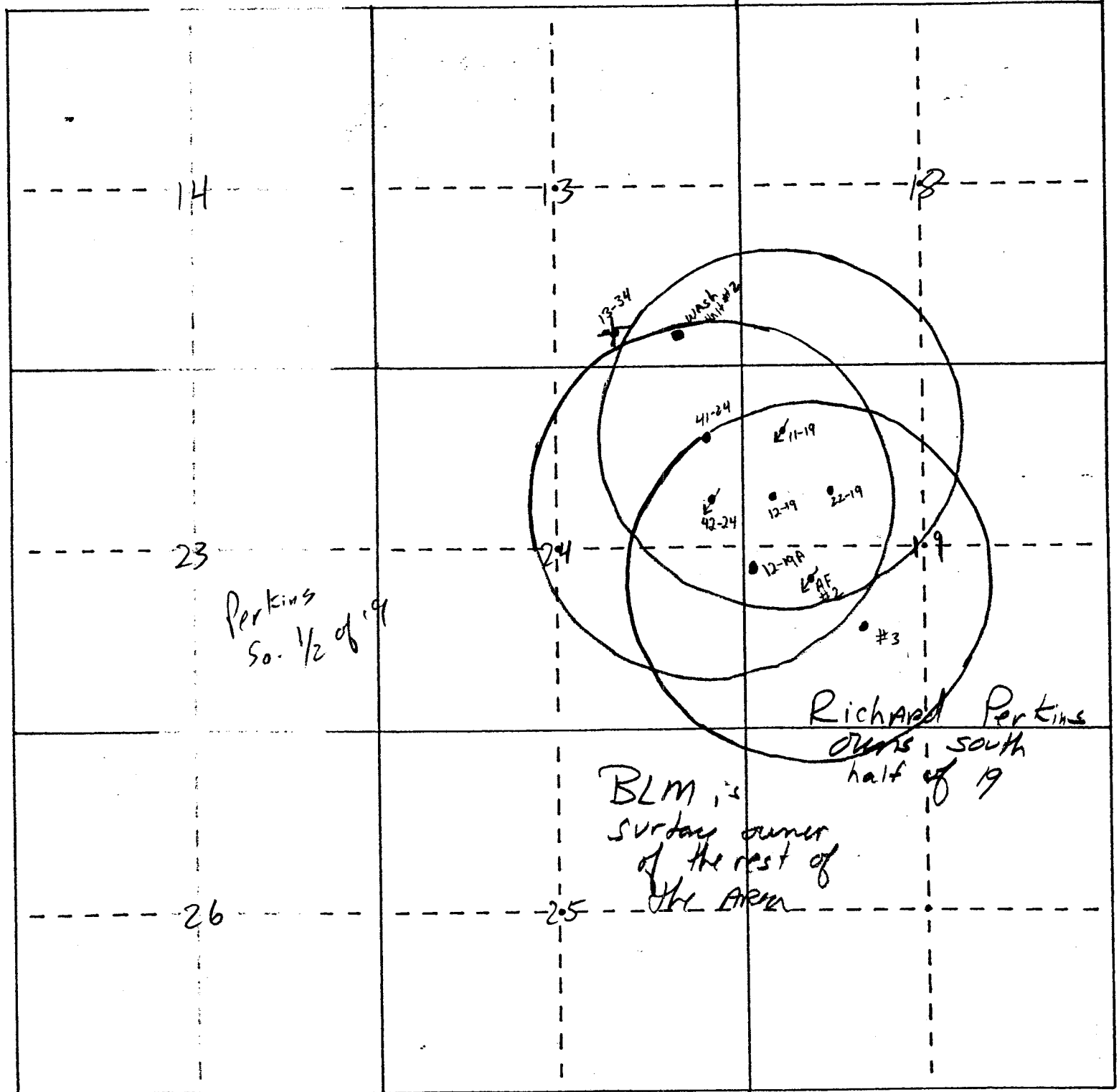
Location

T38S, R23+24E

Sec 19, & 24 San Juan County

23E

24E

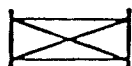


DATE 10/18/88 WELL NO. 22-19 LEASE 385 4E FIELD see 119

$13 \frac{3}{8}$ " \odot 75' $17 \frac{1}{2}$ " hole
 94 SX cement

$8 \frac{5}{8}$ " 1698' 11" hole 490 SX
 cement

$5 \frac{1}{2}$ " \odot 6072' $7 \frac{7}{8}$ " hole
 900 SX cement



BRIDGE PLUG



PACKER



CENTRALIZER



SCRATCHER



BASKET



PERFORATION

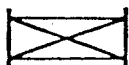
(Use reverse side for additional remarks & sketches.)

DATE 10/18/88 WELL NO. Arabian #3 LEASE 385 2E sec 19 FIELD

13 $\frac{3}{8}$ " C 85 17 $\frac{1}{2}$ " hole
125 SXS cement.

8 $\frac{5}{8}$ " C 1987 12 $\frac{1}{4}$ " hole
1125 SX of cement

5 $\frac{1}{2}$ " C 6082' 7 $\frac{7}{8}$ " hole
375 SX cement



BRIDGE PLUG



PACKER



CENTRALIZER



SCRATCHER



BASKET



PERFORATION

(Use reverse side for additional remarks & sketches.)

MERIDIAN OIL

October 17, 1988

RECEIVED
OCT 19 1988

DIVISION OF
OIL, GAS & MINING

State of Utah
Division of Oil, Gas & Mining
355 West North Temple
3 Triad Center, Suite 350
Salt Lake City, UT 84180-1203

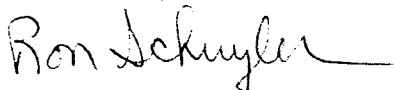
Attn: Dan Jarvis

Re: Produced Water Analysis, Kachina Field,
San Juan County, Utah

Dear Mr. Jarvis:

Please find enclosed a copy of the produced water analysis from 4 of the existing producing oil wells in the above referenced field. I am sending these copies in response to your telephone call this morning. If you require additional data, please call me at (406) 256-4030.

Sincerely,



Ron Schuyler
Senior Production Engineer

Enclosure

cc: S.S. Nelson
T.C. Lechner

RES:DRB:23+

UNICHEM INTERNATIONAL

707 NORTH LEECH

P.O.BOX 1499

HOBBS, NEW MEXICO 88240

COMPANY : ABO PETROLEUM CO.

DATE : 1-27-87

FIELD, LEASE & WELL : AROBIAN #2

SAMPLING POINT: WELLHEAD

DATE SAMPLED : 1-15-87

SPECIFIC GRAVITY = 1.072

TOTAL DISSOLVED SOLIDS = 108811

PH = 6.24

		ME/L	MG/L
CATIONS			
CALCIUM	(CA)+2	372	7454.
MAGNESIUM	(MG)+2	144	1750.
SODIUM	(NA), CALC.	1409.	32394.
ANIONS			
BICARBONATE	(HCO3)-1	.6	36.6
CARBONATE	(CO3)-2	0	0
HYDROXIDE	(OH)-1	0	0
SULFATE	(SO4)-2	24.4	1175
CHLORIDES	(CL)-1	1900	66000
DISSOLVED GASES			
CARBON DIOXIDE	(CO2)	NOT RUN	
HYDROGEN SULFIDE	(H2S)	NOT RUN	
OXYGEN	(O2)	NOT RUN	
IRON(TOTAL)	(FE)		1050.
BARIUM	(BA)+2	0	.04
MANGANESE	(MN)	NOT RUN	

IONIC STRENGTH (MOLAL) = 2.259

SCALING INDEX	TEMP
	30C
	86F
CARBONATE INDEX	- .91
CALCIUM CARBONATE SCALING	UNLIKELY
CALCIUM SULFATE INDEX	-6.0
CALCIUM SULFATE SCALING	UNLIKELY



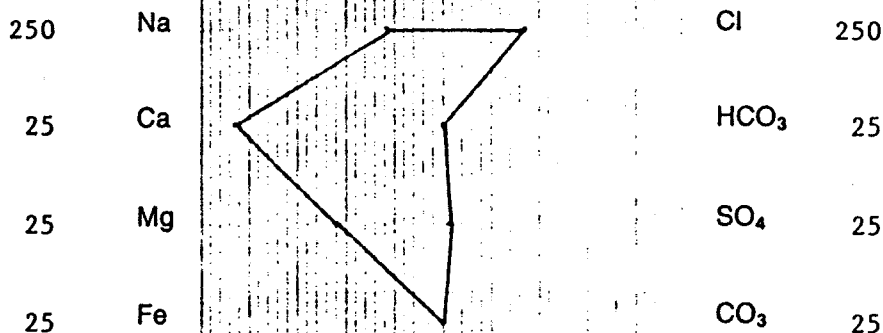
ENERGY LABORATORIES, INC.

P.O. BOX 30916 • 1107 SOUTH BROADWAY • BILLINGS, MT 59107-0916 • PHONE (406) 252-6325

WATER ANALYSIS REPORT Lab. No. 87-1918

Field Kachina County San Juan State Utah
Well No. Havasu Federal 42-24 Location SE NE Sec. 24-38S-23E
Formation Ismay Depths 5759' - 5849'
Operator Meridian Oil, Inc. Date Sampled _____
DST. No. _____ Sample _____ Date Submitted 2/23/87
Hydrogen Sulfide: Present _____ Absent X Other Data _____ Date Reported 2/26/87
Sample was tan and turbid, with pale yellow filtrate.

CATIONS	mg/l	meq/l	ANIONS	mg/l	meq/l
Potassium	1830	46.8	Sulfate	1040	21.6
Sodium	33600	1460	Chloride	77200	2180
Calcium	10700	534	Carbonate	0	0
Magnesium	3460	285	Bicarbonate	0	0

WATER ANALYSIS PATTERN
Scale meq/l Per Unit

Total Dissolved Solids, mg/l 128000 Resistivity @ 68°F, ohms/meter³ 0.071
Chloride as NaCl, mg/l 127000 Specific Gravity @ 60/60°F 1.086
pH 3.9 Cation-Anion Balance, % Diff. 2.84

NOTE: Milligrams/liter (mg/l) approximately equivalent to ppm. meq/l = milliequivalents per liter.

REMARKS:

UNICHEM INTERNATIONAL

707 NORTH LEECH

P.O.BOX 1499

HOBBS, NEW MEXICO 88240

COMPANY : MERIDIAN OIL & GAS

DATE : 03-26-87

FIELD, LEASE & WELL : HAVASU

SAMPLING POINT: #42-24; SEPARATOR

DATE SAMPLED : 03-20-87

SPECIFIC GRAVITY = 1.07

TOTAL DISSOLVED SOLIDS = 107146

PH = 4.3

		ME/L	MG/L
CATIONS			
CALCIUM	(CA)+2	556	11142.
MAGNESIUM	(MG)+2	232	2920.
SODIUM	(NA), CALC.	1134.	26079.

		ME/L	MG/L
ANIONS			
BICARBONATE	(HCO3)-1	0	0
CARBONATE	(CO3)-2	0	0
HYDROXIDE	(OH)-1	0	0
SULFATE	(SO4)-2	22.3	1075
CHLORIDES	(CL)-1	1900	66000

		ME/L	MG/L
DISSOLVED GASES			
CARBON DIOXIDE	(CO2)	NOT RUN	
HYDROGEN SULFIDE	(H2S)	NOT RUN	
OXYGEN	(O2)	NOT RUN	

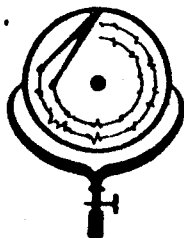
		ME/L	MG/L
IRON(TOTAL)	(FE)		303
BARIUM	(BA)+2	.43	29.6
MANGANESE	(MN)	NOT RUN	

IONIC STRENGTH (MOLAL) = 2.483

SCALING INDEX

TEMP

	30C	48.8C
	86F	120F
CARBONATE INDEX	-3.4	-2.9
CALCIUM CARBONATE SCALING	UNLIKELY	UNLIKELY
CALCIUM SULFATE INDEX	1.23	1.04
CALCIUM SULFATE SCALING	LIKELY	LIKELY



Precision Service, Inc.

BOX 3659 Ph. 307/237-9327
CASPER, WYOMING

BOX 1596 Ph. 701/225-6021
DICKINSON, NORTH DAKOTA

WATER ANALYSIS REPORT

OPERATOR Meridian Oil Co. DATE 11/25/86 LAB NO. 3137-5
WELL NO. #41-24 LOCATION _____
FIELD Kiva FORMATION _____
COUNTY San Juan INTERVAL _____
STATE Utah SAMPLE FROM _____

REMARKS & CONCLUSIONS: Yellow brown water, oil on top, Yellow brown filtrate.

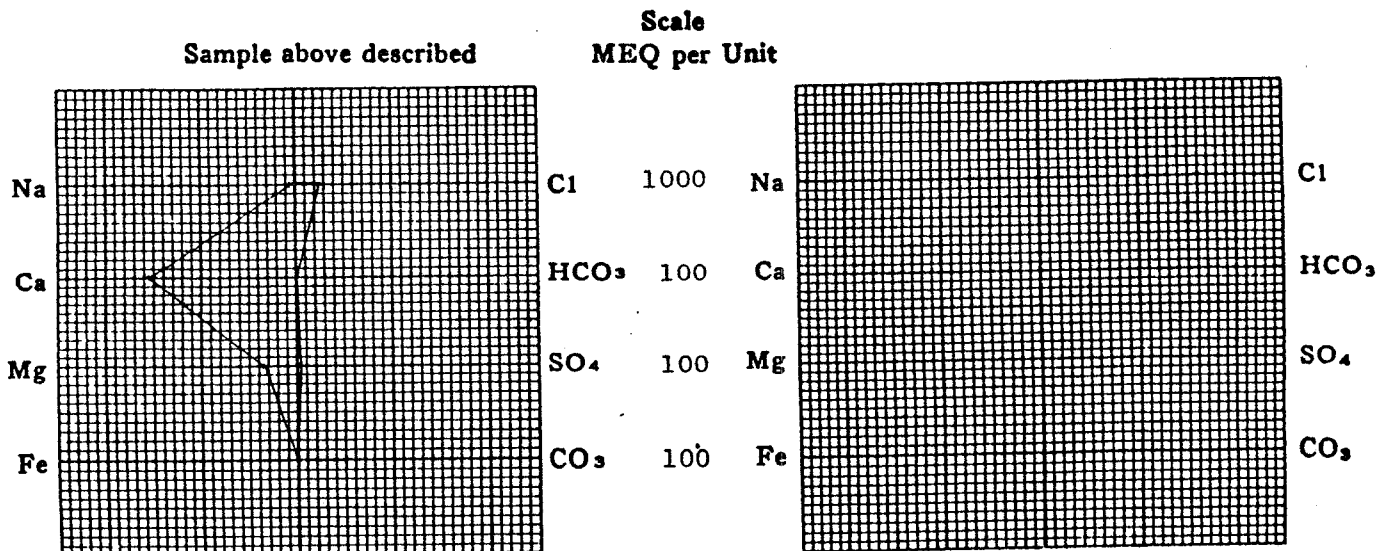
Cations			Anions		
	mg/l	meq/l		mg/l	meq/l
Sodium . . (Calc.)	14,274	620.90	Sulfate	1,164	24.21
Potassium	--	--	Chloride	89,180	2514.88
Lithium	--	--	Carbonate	0	--
Calcium	31,262	1559.97	Bicarbonate	171	2.80
Magnesium	4,392	361.02	Hydroxide	--	--
Iron	present	--	Hydrogen sulfide	--	--
Total Cations		2541.89	Total Anions		2541.89

Total dissolved solids, mg/l 140,443
NaCl equivalent, mg/l 142,565
Observed pH 5.80

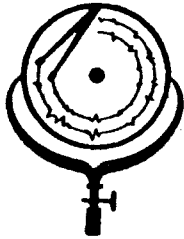
Specific resistance @ 68°F.:
Observed 0.076 ohm-meters
Calculated 0.069 ohm-meters

Observed R.W. in error due to Iron & Magnesium content.

WATER ANALYSIS PATTERN



(Na value in above graphs includes Na, K, and Li)
NOTE: Mg/l=Milligrams per liter Meq/l= Milligram equivalents per liter
Sodium chloride equivalent=by Dunlap & Hawthorne calculation from components



Precision Service, Inc.

BOX 3659 Ph. 307/237-9327
CASPER, WYOMING

BOX 1596 Ph. 701/225-6021
DICKINSON, NORTH DAKOTA

SSN
Well #22-19
WGB DAS
JMS

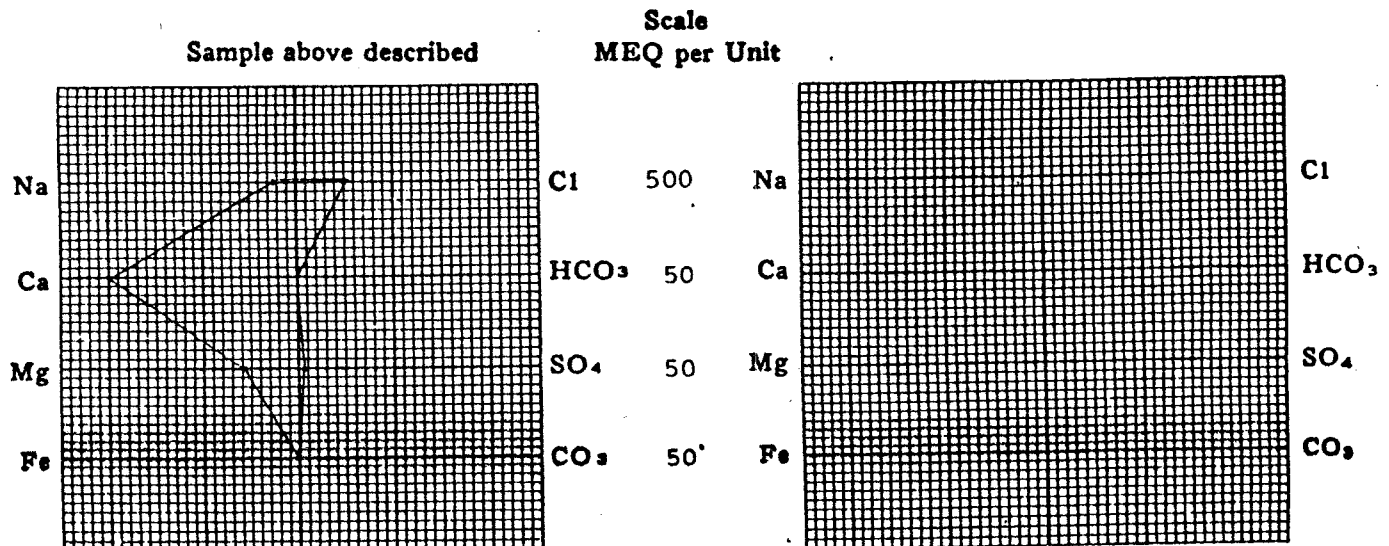
WATER ANALYSIS REPORT

OPERATOR Meridian Oil Co. DATE 11/25/86 LAB NO. 3137-1
WELL NO. #22-19 LOCATION _____
FIELD Kiva FORMATION _____
COUNTY San Juan INTERVAL _____
STATE Utah SAMPLE FROM _____

REMARKS & CONCLUSIONS: Yellow brown water, Light yellow brown filtrate.

Cations			Anions		
	mg/l	meq/l		mg/l	meq/l
Sodium . . . (Calc) . .	29,558	1285.75	Sulfate	1,050	21.84
Potassium	--	--	Chloride	90,160	2542.51
Lithium	--	--	Carbonate	0	--
Calcium	20,040	1000.00	Bicarbonate	134	2.20
Magnesium	3,416	280.80	Hydroxide	--	--
Iron	present	--	Hydrogen sulfide	--	--
Total Cations		2566.55	Total Anions		2566.55
Total dissolved solids, mg/l		144,358	Specific resistance @ 68°F.:		
NaCl equivalent, mg/l		146,149	Observed	0.071	ohm-meters
Observed pH		5.68	Calculated	0.068	ohm-meters

WATER ANALYSIS PATTERN



(Na value in above graphs includes Na, K, and Li)
NOTE: Mg/l=Milligrams per liter Meq/l= Milligram equivalents per liter
Sodium chloride equivalent=by Dunlap & Hawthorne calculation from components



State of Utah
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

Norman H. Bangerter

Governor

Dee C. Hansen

Executive Director

Dianne R. Nielson, Ph.D.

Division Director

355 West North Temple

3 Triad Center, Suite 350

Salt Lake City, Utah 84180-1203

801-538-5340

October 27, 1988

Newspaper Agency Corporation
Legal Advertising
157 Regent Street
Salt Lake City, Utah 84110

Gentlemen:

Re: Cause No. UIC-114

Enclosed is a Notice Action before the Division of Oil, Gas and Mining, Department of Natural Resources, State of Utah.

It is requested that this notice be published ONCE ONLY, as soon as possible, but no later than the 9th day of November, 1988. In the event that said notice cannot be published by this date, please notify me immediately by calling 538-5340.

Upon completion of this request, please send proof of publication and statement of cost to the Division of Oil, Gas and Mining, 355 West North Temple, 3 Triad Center, Suite 350, Salt Lake City Utah 84180-1203

Sincerely,

Barbara Dumas
Office Technician

bd
Enclosure
UI2/6

BEFORE THE DIVISION OF OIL, GAS AND MINING
DEPARTMENT OF NATURAL RESOURCES
STATE OF UTAH

---oo0oo---

IN THE MATTER OF THE APPLICATION	:	NOTICE OF AGENCY ACTION
OF MERIDIAN OIL FOR ADMINISTRATIVE	:	
APPROVAL OF THE HAVASU FEDERAL	:	CAUSE NO. UIC-114
NO. 11-19 AND NO. 42-24 WELLS AND	:	
ARABIAN FEDERAL NO. 2 LOCATED IN	:	
SECTIONS 19 AND 24 TOWNSHIP 38 SOUTH,	:	
RANGE 24 AND 23 EAST, S.L.M.,	:	
SAN JUAN COUNTY, UTAH, AS CLASS II	:	
INJECTION WELLS	:	

---oo0oo---

THE STATE OF UTAH TO ALL PERSONS INTERESTED IN THE ABOVE ENTITLED MATTER.

Notice is hereby given that the Division is commencing an informal adjudicative proceeding to consider the application of Meridian Oil Incorporated for administrative approval of the Havasu Federal No. 11-19 and No. 42-24 wells, and Arabian Federal No. 2 well located in Sections 19 and 24, Township 38 South, Range 24 and 23 East SLM, San Juan County, Utah, for conversion to Class II injection wells. The proceeding will be conducted according to the provisions of the Administrative Procedures rules, R615-10.

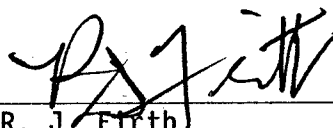
The operating data for the wells is as follows:

Injection Interval: Paradox Formation, 5723' to 5850'
Maximum Injection Rate/Surface Pressure: 2000 bwpd @ 3700 psig

Administrative approval of this application will be granted unless an objection is filed within fifteen days after publication of this notice by any person authorized to participate as a party in this adjudicative proceeding. If an objection is received by the Division, a formal adjudicative proceeding will be scheduled before the Board of Oil, Gas and Mining.

DATED this 27th day of October, 1988

STATE OF UTAH
DIVISION OF OIL, GAS AND MINING



R. J. Firth
Associate Director, Oil and Gas

Publications sent to the following

Meridian Oil Inc.
P.O. Box 1855
Billings, Montana 59103


Newspaper Agency Corporation
Legal Advertising
157 Regent Street
Salt Lake City, Utah 84110

San Juan Record
P.O. Box 879
937 East Highway 666
Monticello, Utah 84535-0879

Bureau of Land Management
Moab District Office
P. O. Box 970
Moab, Utah 94532

U.S. EPA
999 18th Street Suite 500
Denver, Colorado 80202-2405

Richard C. Perkins
184 North 100 West (16-4)
Blanding, Utah 84511


Barbara Dumas
Oil and Gas Technician
October 12, 1988

FED. TAX I.D. # 87-0217663

Newspaper Agency Corporation

The Salt Lake Tribune

DESERET NEWS

MORNING & SUNDAY

EVENING & SUNDAY

Affidavit of Publication

STATE OF UTAH.

County of Salt Lake

SS.

1 *Pam Anderson*
advertisement of NOTICE OF AG
for DIV. OF OIL & GAS & MINI

Hereby certify that the attache

was published by the

NEWSPAPER AGENCY CORPORATION, AGENT FOR THE SALT LAKE TRIBUNE and DESERET NEWS, daily newspapers printed in the English language with general circulation in Utah, and published in Salt Lake City, Salt Lake County in the State of Utah.

PUBLISHED ON NOV 04 1988

SUBSCRIBED AND SWORN TO BEFORE ME THIS 5TH DAY OF NOVEMBER 19 88

NOTICE OF AGENCY ACTION
CAUSE NO. UIC-444
BEFORE THE DIVISION OF OIL
GAS AND MINING
DEPARTMENT OF NATURAL
RESOURCES, STATE OF UTAH
IN THE MATTER OF THE APPLICATION
OF MERIDIAN OIL FOR ADMINISTRATIVE APPROVAL OF THE
HAVASU FEDERAL NO. 11-19 AND
NO. 42-24 WELLS AND ARABIAN
FEDERAL NO. 2 LOCATED IN SECTIONS
19 AND 24 TOWNSHIP 38
SOUTH, RANGE 24 AND 23 EAST,
S.L.M. SAN JUAN COUNTY, UTAH,
AS CLASS II INJECTION WELLS.
THE STATE OF UTAH TO ALL PERSONS
INTERESTED IN THE ABOVE ENTITLED MATTER.

Notice is hereby given that the Division is commencing an informal adjudicative proceeding to consider the application of Meridian Oil Incorporated for administrative approval of the Havasu Federal No. 11-19 and No. 42-24 wells, and Arabian Federal No. 2 well located in Section 19 and 24, Township 38 South, Range 24 and 23 East S1M, San Juan County, Utah, for conversion to Class II injection wells. The proceeding will be conducted according to the provisions of the Administrative Procedures Rules, R615-10.

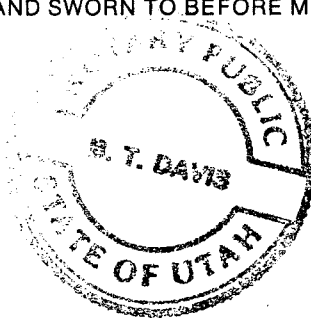
The operating data for the wells is as follows:
Injection Interval: Paradox Formation, 5723' to 5850'

Maximum Injection Rate/Surface Pressure: 2000 bwpd @ 3700 psig

Administrative approval of this application will be granted unless an objection is filed within fifteen days after publication of this notice by any person authorized to participate as a party in this adjudicative proceeding. If an objection is received by the Division, a formal adjudicative proceeding will be scheduled before the Board of Oil, Gas and Mining.

DATED this 27th day of October, 1988.

STATE OF UTAH
DIVISION OF OIL, GAS AND
MINING
/s/ R. J. Firth
Associate Director, Oil and Gas
B-41



B. J. Warr

NOTARY PUBLIC

MARCH 1, 1992

COMMISSION EXPIRES
RESIDING IN SALT LAKE COUNTY

LEGAL ADVERTISING INVOICE

ACCOUNT NAME		AD NUMBER		TELEPHONE	
OF OIL, GAS & MINI		B-41		801-538-5340	
SCHEDULE				MISC. CHARGES	
C NOV 04 1988				.00	
OPTION	SIZE	TIMES	RATE	AD CHARGE	
ENCY ACTION CAUSE	63 LINES	1	1.29	81.27	
TABLE ON RECEIPT OF THIS INVOICE FOR MORE INFORMATION CALL 801-237-2796			TOTAL AMOUNT DUE		81.27

TO INSURE PROPER CREDIT

PLEASE RETURN THIS PORTION

WITH YOUR PAYMENT IN THE ENCLOSED ENVELOPE
MAKE CHECKS PAYBLE TO:

NEWSPAPER AGENCY CORPORATION

(PLEASE WRITE YOUR ACCOUNT
NUMBER ON YOUR CHECK.)

BILL TO:

DIV. OF OIL, GAS & MIN
3 TRIAD CENTER, #350

SLC.

UT 84180

ACCOUNT NUMBER	BILLING DATE
LE-5385340	11/05/88
AD NUMBER	PAY THIS AMOUNT
B-41	81.27

0702556461000000000000000008127 181366757211111111111111119238



State of Utah

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

Norman H. Bangertter

Governor

Dee C. Hansen

Executive Director

Dianne R. Nielson, Ph.D.

Division Director

355 West North Temple

3 Triad Center, Suite 350

Salt Lake City, Utah 84180-1203

801-538-5340

November 23, 1988

Meridian Oil Incorporated
P.O. Box 1855
Billings, Montana 59103

Gentlemen:

RE: Havasu Federal No. 11-19, Arabian Federal No. 2 and Havasu No. 42-24 Wells
Located in Sections 19 and 24, Township 38 South, Range 24 and 23 East,
S.L.M., San Juan County, Utah

In accordance with Rule R615-5-3(3), Oil and Gas Conservation General Rules, administrative approval for the referenced Class II injection wells is granted.

The following actions are necessary to fully comply with this approval:

- 1) Compliance with the UIC requirements for operation, maintenance and reporting for Class II injection wells.
- 2) Conformance with all conditions of the submitted application.

If you have any questions regarding this approval or the necessary requirements, please contact this office.

Best regards,

Dianne R. Nielson
Director

bd

cc: BLM, Moab

UI40/6

RECEIVED
NOV 30 1988

FILING FOR WATER IN THE STATE OF UTAH

NOV 17 1988

NOV 1 1988 DIVISION OF OIL, GAS & MINING

by J.K.
Fee Rec. 90.00
Receipt # 25260

TEMPORARY

APPLICATION TO APPROPRIATE WATER
SALT LAKE

TEMPORARY

Microfilmed

Roll #

For the purpose of acquiring the right to use a portion of the unappropriated water of the State of Utah, application is hereby made to the State Engineer, based upon the following showing of facts, submitted in accordance with the requirements of the Laws of Utah.

* WATER USER CLAIM NO. 09 — 1615

* APPLICATION NO. A T63657

1. PRIORITY OF RIGHT: November 14, 1988

* FILING DATE: November 14, 1988

2. OWNER INFORMATION

Name(s): MERIDIAN OIL INC. * Interest: _____ %
Address: P.O. Box 1855, Billings, MT 59103

Is the land owned by the applicant? Yes _____ No X _____
(If "No", please explain in EXPLANATORY section.)

3. QUANTITY OF WATER: _____ cfs and/or 300 _____ ac-ft

4. SOURCE: Wash Unit Well No. 2 * DRAINAGE: _____
which is tributary to _____
which is tributary to _____

POINT(S) OF DIVERSION: _____ COUNTY: San Juan
470' FSL - 850' FEL, Section 13, T38S, R23E
N. 470 ft. & W. 850 ft. from SE Cor. Sec. 13, T38S, R23E, SLB&M.

Description of Diverting Works: 5-1/2" casing set @ 6064'

* COMMON DESCRIPTION: 13 miles SE of Blanding Montezuma Creek Quad

5. POINT(S) OF REDIVERSION

The water will be rediverted from N/A _____ at a point: _____

Description of Rediverting Works: _____

6. POINT(S) OF RETURN

The amount of water consumed is _____ cfs or 300 _____ ac-ft

The amount of water returned is _____ cfs or _____ ac-ft

The water will be returned to the natural stream/source at a point(s): _____

7. STORAGE

Reservoir Name: N/A Storage Period: from _____ to _____

Capacity: _____ ac-ft. Inundated Area: _____ acres

Height of dam: _____ feet

Legal description of inundated area by 40 acre tract: _____

TEMPORARY

* These items are to be complete by Division of Water Rights

Appropriate

8. List any other water rights which are or will supplement this application _____

9. NATURE AND PERIOD OF USE

Stockwatering:	From _____ to _____
Domestic:	From _____ to _____
Municipal:	From _____ to _____
Mining:	From _____ to _____
Power:	From _____ to _____
Other: Waterflood	From <u>November 11</u> to <u>November 11, 1989</u>
Irrigation:	From <u>1988</u> to _____

10. PURPOSE AND EXTENT OF USE

Stockwatering (number and kind): _____
Domestic: _____ Families and/or _____ Persons
Municipal (name): _____
Mining: _____ Mining District in the _____ Mine
Ores mined: _____
Power: Plant name: _____ Type: _____ Capacity: _____
Other (describe): Secondary Recovery - Water source for Kachina Waterflood
Irrigation: _____ acres. Sole supply of _____ acres
Legal description of irrigated area by 40 acre tract: _____

11. PLACE OF USE

Legal description of areas of use other than irrigation, if not the same as irrigated area above, by 40 acre tract: 42-24 Havasu Federal, SENE Section 24, T38S, R23E 43-037-31298 - Sow
11-19 Havasu Federal, NWNW Section 19, T38S, R24E 43-037-31458 - D.M.
ABO #2 Arabian Federal, NWSW Section 19, T38S, R24E 43-037-31282 - Sow

12. EXPLANATORY

The following is set forth to define more clearly the full purpose of this application. (Use additional pages of same size if necessary): Landowner - Federal Lease No. U-20894. Water production will be utilized for injection into the Ismay formation for enhanced recovery. Water production is from the Shinarump formation (2850'-2948') and is brackish (see attached analysis).

The applicant(s) hereby acknowledges that he/she/they are a citizen(s) of the United States of America or intends to become such a citizen(s). The quantity of water sought to be appropriated is limited to that which can be beneficially used for the purposes herein described. The undersigned hereby acknowledges that even though he/she/they may have been assisted in the preparation of the above-numbered application through the courtesy of the employees of the Division of Water Rights, all responsibility for the accuracy of the information contained herein, at the time of filing, rests with the applicant(s).

William H. Pearce
Signature of Applicant(s)

TEMPORARY

STATE ENGINEER'S ENDORSEMENT

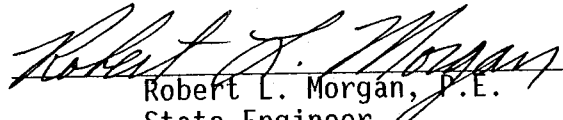
WATER RIGHT NUMBER: 09 - 1615

APPLICATION NO. T63657

1. November 14, 1988 Application received by MP.
 2. November 15, 1988 Application designated for APPROVAL by MP and KLJ.
 3. Comments:
-
-

Conditions:

This application is hereby APPROVED, dated November 29, 1988, subject to prior rights and this application will expire on November 29, 1989.


Robert L. Morgan, P.E.
State Engineer

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN TRIPLICATE*
(Other instructions on re-
verse side)

Form approved.
Budget Bureau No. 1004-0135
Expires August 31, 1985

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir.
Use "APPLICATION FOR PERMIT—" for such proposals.)

1. OIL WELL <input type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER - Water Injection		5. LEASE DESIGNATION AND SERIAL NO. U-20895
2. NAME OF OPERATOR MERIDIAN OIL INC.		6. IF INDIAN, ALLOTTEE OR TRIBE NAME N/A
3. ADDRESS OF OPERATOR P. O. Box 1855, Billings, MT 59103		7. UNIT AGREEMENT NAME Kachina
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.) At surface NENE (1050' FNL - 500' FEL)		8. FARM OR LEASE NAME Havasuu-Federal
14. PERMIT NO. 43-037-31298		9. WELL NO. 42-24
15. ELEVATIONS (Show whether SP, RT, GR, etc.) 5118' KB		10. FIELD AND POOL, OR WILDCAT Kachina
		11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA Section 24, T38S, R23E
		12. COUNTY OR PARISH San Juan
		13. STATE Utah

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
TEST WATER SHUT-OFF <input type="checkbox"/>	PULL OR ALTER CASING <input type="checkbox"/>	WATER SHUT-OFF <input type="checkbox"/>	REPAIRING WELL <input type="checkbox"/>
FRACTURE TREAT <input type="checkbox"/>	MULTIPLE COMPLETE <input type="checkbox"/>	FRACTURE TREATMENT <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
SHOOT OR ACIDIZE <input type="checkbox"/>	ABANDON* <input type="checkbox"/>	SHOOTING OR ACIDIZING <input type="checkbox"/>	ABANDONMENT* <input type="checkbox"/>
REPAIR WELL <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>	(Other) <u>First Water Injection</u> <input checked="" type="checkbox"/>	
(Other) <input type="checkbox"/>		(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)	

17. DESCRIBE PROMISED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

Well started injecting water November 15, 1988.

RECEIVED
DEC 15 1988

DIVISION OF
OIL, GAS & MINING

18. I hereby certify that the foregoing is true and correct

SIGNED [Signature] TITLE Production Superintendent DATE 12/13/88

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

BLM (3), UOG&M (3), WGB, RES, File

*See Instructions on Reverse Side

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN TRIPLICATE*
(Other instructions on re-
verse side)

Form approved.
Budget Bureau No. 1004-0135
Expires August 31, 1985

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir.
Use "APPLICATION FOR PERMIT—" for such proposals.)

1. OIL WELL <input type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <input checked="" type="checkbox"/> Water Injection		5. LEASE DESIGNATION AND SERIAL NO. U-20895	
2. NAME OF OPERATOR MERIDIAN OIL INC.		6. IF INDIAN, ALLOTTEE OR TRIBE NAME N/A	
3. ADDRESS OF OPERATOR P. O. Box 1855, Billings, MT 59103		7. UNIT AGREEMENT NAME Kachina	
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.) At surface NENE (1050' FNL - 500' FEL)		8. FARM OR LEASE NAME Havasus-Federal	
14. PERMIT NO. 43-037-31298		9. WELL NO. 42-24	
15. ELEVATIONS (Show whether DF, RT, OR, etc.) 5118' KB		10. FIELD AND POOL, OR WILDCAT Kachina	
		11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA Section 24, T38S, R23E	
		12. COUNTY OR PARISH San Juan	13. STATE Utah

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:

TEST WATER SHUT-OFF <input type="checkbox"/>	PULL OR ALTER CASING <input type="checkbox"/>
FRACTURE TREAT <input type="checkbox"/>	MULTIPLE COMPLETE <input type="checkbox"/>
SHOOT OR ACIDIZE <input type="checkbox"/>	ABANDON* <input type="checkbox"/>
REPAIR WELL <input type="checkbox"/>	CHANGE PLANE <input type="checkbox"/>
(Other) <input type="checkbox"/>	

SUBSEQUENT REPORT OF:

WATER SHUT-OFF <input type="checkbox"/>	REPAIRING WELL <input type="checkbox"/>
FRACTURE TREATMENT <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
SHOOTING OR ACIDIZING <input type="checkbox"/>	ABANDONMENT* <input type="checkbox"/>
(Other) <input checked="" type="checkbox"/> First Water Injection	

(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

Well started injecting water November 15, 1988.

RECEIVED
DEC 15 1988

DIVISION OF
OIL, GAS & MINING

18. I hereby certify that the foregoing is true and correct

SIGNED W. G. Shaw TITLE Production Superintendent DATE 12/13/88

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE _____
CONDITIONS OF APPROVAL, IF ANY:

BLM (3), UOG&M (3), WGB, RES, File

*See Instructions on Reverse Side

MERIDIAN OIL

December 15, 1988

RECEIVED
DEC 19 1988

DIVISION OF
OIL, GAS & MINING

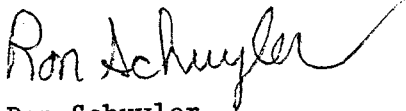
State of Utah
Division of Oil, Gas & Mining
355 West North Temple
3 Triad Center, Suite 350
Salt Lake City, UT 84180-1203
Attention: Dan Jarvis

Re: Water Supply Well Water Analysis
Kachina Waterflood, San Juan County, Utah

Dear Mr. Jarvis:

Please find enclosed a copy of the analysis for make up water to be used in waterflooding the Ismay formation in the Kachina waterflood. As I mentioned in our telephone conversation this afternoon, we have not been able to run the step rate tests on the injection wells due to mechanical problems. As soon as we obtain this data, we will forward it to you. If you have any questions, please contact me at (406) 256-4030.

Sincerely,

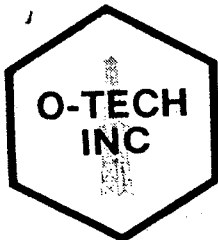


Ron Schuyler
Senior Production Engineer

RS/mm/104+

Enclosure

cc: S. S. Nelson
T. C. Lechner



Oilfield Chemical Technology

Meridian Oil Company
Havasue Field
WSW Shinerump Formation
Lab No.: 88-593
11/07/88

Perfs: 2948-2880' and
2866-2850'

WATER ANALYSIS REPORT

Cations	mg/L	Anions	mg/L
Potassium	ND.	Sulfate	5,250.0
Sodium	9,195.0	Chloride	12,700.0
Calcium	992.0	Carbonate	0.0
Magnesium	248.0	Bicarbonate	161.0
Total Iron	0.35	Hydroxide	ND.
Diss. Iron	ND.	Silica	ND.
Barium	0.0		
Strontium			

System Conditions
System Operation:
Sample Temperature, °F
Sample pH

Normal
ND.
6.3

Total Hardness 3,500.0

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN TRIPLICATE*
(Other instructions on re-
verse side)

Form approved.
Budget Bureau No. 1004-0135
Expires August 31, 1985

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir.
Use "APPLICATION FOR PERMIT-1" for such proposals.)

1. <input type="checkbox"/> OIL WELL <input type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <u>Wtr Injection Well</u>		5. LEASE DESIGNATION AND SERIAL NO. U-20895
2. NAME OF OPERATOR Meridian Oil Inc.		6. IF INDIAN, ALLOTTEE OR TRIBE NAME N/A
3. ADDRESS OF OPERATOR P.O. Box 1855, Billings, MT 59103		7. UNIT AGREEMENT NAME Kachina
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements. See also space 17 below.) At surface SENE (1970' FNL - 461' FEL)		8. FARM OR LEASE NAME Havasu-Federal
14. PERMIT NO. 43-035-31298		9. WELL NO. 42-24
15. ELEVATIONS (Show whether DF, RT, GR, etc.) 5125' KB		10. FIELD AND POOL, OR WILDCAT Kachina
		11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA Section 24-T38S-R23E
		12. COUNTY OR PARISH San Juan
		13. STATE Utah

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
TEST WATER SHUT-OFF <input type="checkbox"/>	PULL OR ALTER CASING <input type="checkbox"/>	WATER SHUT-OFF <input type="checkbox"/>	REPAIRING WELL <input type="checkbox"/>
FRACTURE TREAT <input type="checkbox"/>	MULTIPLE COMPLETE <input type="checkbox"/>	FRACTURE TREATMENT <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
SHOOT OR ACIDIZE <input type="checkbox"/>	ABANDON* <input type="checkbox"/>	SHOOTING OR ACIDIZING <input type="checkbox"/>	ABANDONMENT* <input type="checkbox"/>
REPAIR WELL <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>	(Other) <u>Conversion to Wtr Inj Well</u> <input checked="" type="checkbox"/>	
(Other) <input type="checkbox"/>		(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)	

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)

POH w/pump & rods, ran 2-7/8" tbg set @ 5701', pkr set @ 5702'. Currently injecting into original Ismay formation perms, 5759'-5849', avg of 1795 BWPD @ 2715 psi.

18. I hereby certify that the foregoing is true and correct

SIGNED <u>W. B. Brown</u>	TITLE <u>Engineer</u>	DATE <u>2-14-89</u>
(This space for Federal or State office use)		
APPROVED BY _____	TITLE _____	DATE _____
CONDITIONS OF APPROVAL, IF ANY:		

*See Instructions on Reverse Side

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

SUNDRY NOTICES AND REPORTS ON WELLS <small>Do not use this form for proposals to drill new wells, deepen existing wells, or to reenter plugged and abandoned wells. Use APPLICATION FOR PERMIT— for such proposals.</small>		6. Lease Designation and Serial Number U-20895																										
		7. Indian Allottee or Tribe Name N/A																										
		8. Unit or Communitization Agreement Kachina																										
1. Type of Well <input type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input checked="" type="checkbox"/> Other (specify) <u>Water injection well</u>		9. Well Name and Number Havasu Federal 42-24																										
2. Name of Operator Meridian Oil Inc.		10. API Well Number 43-039-31298																										
3. Address of Operator P.O. Box 1165, Sidney, MT 59270	4. Telephone Number 406-482-5310	11. Field and Pool, or Wildcat Kachina																										
5. Location of Well Footage : 1970' FNL - 461' FEL <u>43-039-31298</u> County : San Juan QQ, Sec. T., R., M. : SENE Sec. 24-T38S-R23E State : UTAH																												
12. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA																												
NOTICE OF INTENT (Submit in Duplicate) <table style="width: 100%;"> <tr> <td><input type="checkbox"/> Abandonment</td> <td><input type="checkbox"/> New Construction</td> </tr> <tr> <td><input type="checkbox"/> Casing Repair</td> <td><input type="checkbox"/> Pull or Alter Casing</td> </tr> <tr> <td><input type="checkbox"/> Change of Plans</td> <td><input type="checkbox"/> Recompletion</td> </tr> <tr> <td><input type="checkbox"/> Conversion to Injection</td> <td><input type="checkbox"/> Shoot or Acidize</td> </tr> <tr> <td><input type="checkbox"/> Fracture Treat</td> <td><input type="checkbox"/> Vent or Flare</td> </tr> <tr> <td><input type="checkbox"/> Multiple Completion</td> <td><input type="checkbox"/> Water Shut-Off</td> </tr> <tr> <td><input type="checkbox"/> Other _____</td> <td></td> </tr> </table> Approximate Date Work Will Start _____		<input type="checkbox"/> Abandonment	<input type="checkbox"/> New Construction	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> Pull or Alter Casing	<input type="checkbox"/> Change of Plans	<input type="checkbox"/> Recompletion	<input type="checkbox"/> Conversion to Injection	<input type="checkbox"/> Shoot or Acidize	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Vent or Flare	<input type="checkbox"/> Multiple Completion	<input type="checkbox"/> Water Shut-Off	<input type="checkbox"/> Other _____		SUBSEQUENT REPORT (Submit Original Form Only) <table style="width: 100%;"> <tr> <td><input type="checkbox"/> Abandonment *</td> <td><input type="checkbox"/> New Construction</td> </tr> <tr> <td><input type="checkbox"/> Casing Repair</td> <td><input type="checkbox"/> Pull or Alter Casing</td> </tr> <tr> <td><input type="checkbox"/> Change of Plans</td> <td><input type="checkbox"/> Shoot or Acidize</td> </tr> <tr> <td><input type="checkbox"/> Conversion to Injection</td> <td><input type="checkbox"/> Vent or Flare</td> </tr> <tr> <td><input type="checkbox"/> Fracture Treat</td> <td><input type="checkbox"/> Water Shut-Off</td> </tr> <tr> <td><input checked="" type="checkbox"/> Other <u>Notice of Spill</u></td> <td></td> </tr> </table> Date of Work Completion _____	<input type="checkbox"/> Abandonment *	<input type="checkbox"/> New Construction	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> Pull or Alter Casing	<input type="checkbox"/> Change of Plans	<input type="checkbox"/> Shoot or Acidize	<input type="checkbox"/> Conversion to Injection	<input type="checkbox"/> Vent or Flare	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Water Shut-Off	<input checked="" type="checkbox"/> Other <u>Notice of Spill</u>	
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<input checked="" type="checkbox"/> Other <u>Notice of Spill</u>																												

13. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)

On May 5, 1991, a saltwater spill was discovered at the above location. The spill was a result of a leak in the water injection line. An estimated 50 barrels of produced water was spilled, which affected approximately 100 yards, including a creek bottom and a dry portion of a stock pond.

Production Supervisor, David Overgaard notified Robert Larson with the Bureau of Land Management, on May 6, 1991, at 8:30 A.M. and also notified Gil Hunt with the State of Utah that same morning at 8:35 A.M.

There was no clean-up performed, as produced water was left to be diluted by rain, as per B.L.M. request.

The line was repaired and on May 13, 1991, the line was tested to 3200 psi and held. The results were satisfactory, so the well was turned on that same day at 3:00 P.M.

14. I hereby certify that the foregoing is true and correct

Name & Signature

Tim Cole

Title Production Supt.

Date May 14, 1991

(State Use Only)

RECEIVED

MAY 17 1991

FORM 3160-5
December 1989

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
Budget Bureau No. 1004-0135
Expires September 30, 1990

5. Lease Designation and Serial No.
U-20895

SUNDRY NOTICES AND REPORTS ON WELLS
Do not use this form for proposals to drill or to deepen or reentry to a different reservoir. Use "APPLICATION FOR PERMIT" for such proposals

6. If Indian, Allottee or Tribe Name
N/A

1. Type of Well Oil Well Gas Well Other Water Injection

7. If Unit or CA, Agreement Designation
Kachina

2. Name of Operator
MERIDIAN OIL INC.

8. Well Name and No.
Havasu Federal 42-24

3. Address and Telephone No.
5613 DTC PARKWAY; ENGLEWOOD, CO 80111 (303) 930-9300

9. API Well No. 43-037-31298
43-039-31298

4. Location of Well (Footage, Sec., T.R.M. or Survey Description)
1970' FNL - 461' FEL
SENE Sec. 24, T38S-R23E

10. Field and Pool, or Exploratory Area
Kachina

11. County or Parish, State
San Juan/Utah

12. CHECK APPROPRIATE BOX(S) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION

TYPE OF ACTION

☒ Notice of Intent

☐ Abandonment

☐ Change of Plans

☐ Subsequent Report

☐ Recompletion

☐ New Construction

☐ Plugging Back

☐ Non-Routine Fracturing

☐ Casing Repair

☐ Water Shut-Off

☐ Final Abandonment Notice

☐ Altering Casing

☐ Conversion to Injection

☒ Other Replace water injection line

(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

13. Describe Proposed or Completed Operations (Clearly state all pertinent details and give pertinent dates including estimated date of starting any proposed work. If well is directionally drilled give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

It is planned to replace the 2500' injection line from the water plant to the subject well with 3", Schedule 80 line pipe. The existing line is in poor condition and has had numerous leaks. The attached map shows the planned right-of-way, which will follow the existing one.

ACCEPTED BY THE STATE
OF UTAH DIVISION OF
OIL, GAS, AND MINING

DATE: 5-6-92

BY: JPO Jettens

RECEIVED

MAY 05 1992

DIVISION OF
OIL, GAS & MINING

14. I hereby certify that the foregoing is true and correct

SIGNED

Karen F. Riley

Title

Senior Production Engineer

Date

4-29-92

(This space for Federal or State office use)

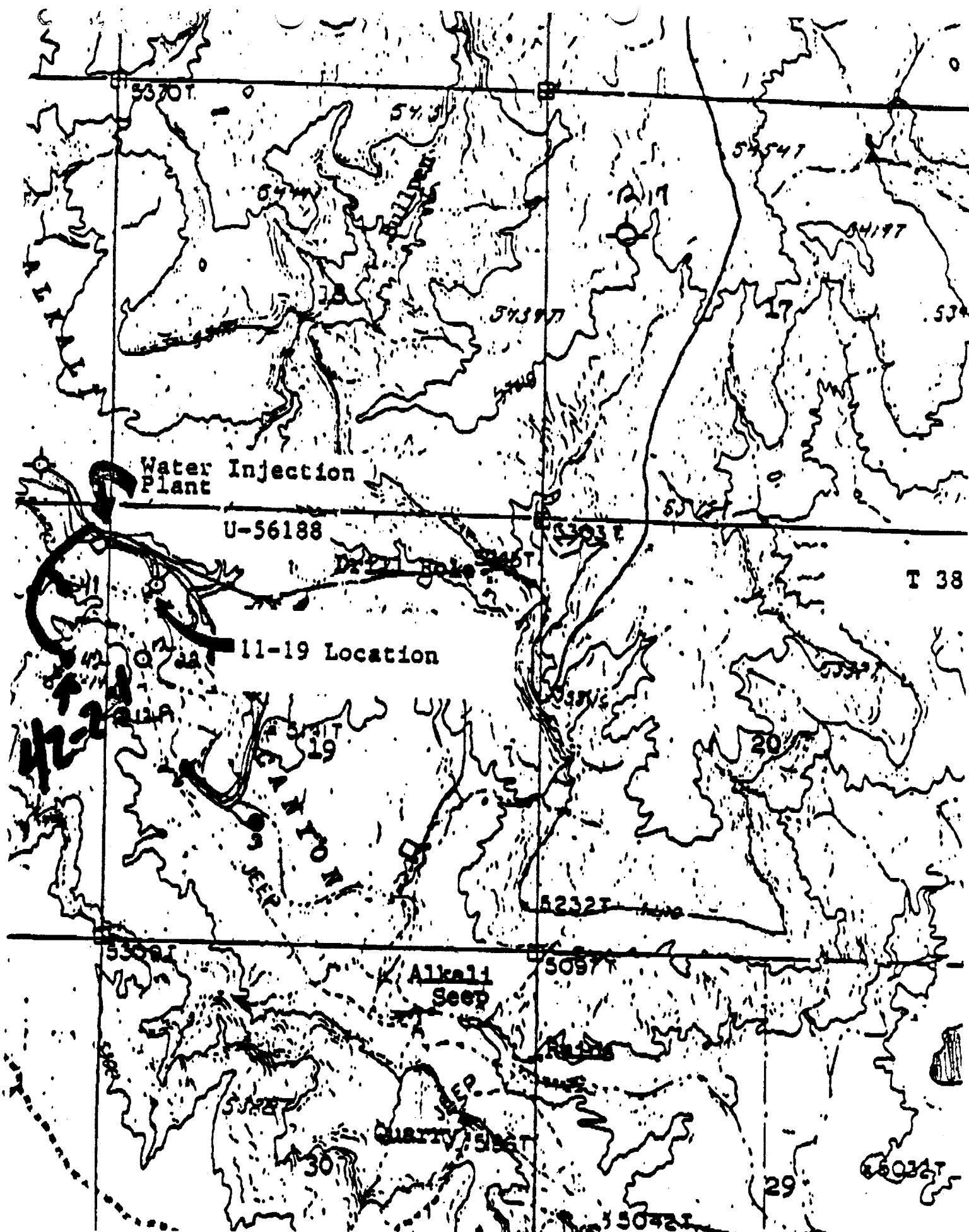
Approved by

Condition of Approval, If any:

Title

Date

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statement or representations as to any matter within its jurisdiction.



Water Injection Plant

U-56188

Drill Hole

11-19 Location

Alkali Seep

Quarry

FORM 3160-5
December 1989UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENTFORM APPROVED
Budget Bureau No. 1004-0135
Expires September 30, 1990SUNDRY NOTICES AND REPORTS ON WELLS
Do not use this form for proposals to drill or to deepen or reentry to a different reservoir. Use "APPLICATION FOR PERMIT" for such proposals

1. Type of Well Oil Well Gas Well Other Water Injection	5. Lease Designation and Serial No. U-20895
2. Name of Operator MERIDIAN OIL INC.	6. If Indian, Allottee or Tribe Name N/A
3. Address and Telephone No. 5613 DTC PARKWAY; ENGLEWOOD, CO 80111 (303) 930-9300	7. If Unit or CA, Agreement Designation Kachina
4. Location of Well (Footage, Sec., T.R.M. or Survey Description) 1970' FNL - 461' FEL SENE Sec. 24, T38S-R23E	8. Well Name and No. Havasu Federal 42-24
	9. API Well No. <u>42-037-31298</u> 43-039-31298
	10. Field and Pool, or Exploratory Area Kachina
	11. County or Parish, State San Juan/Utah

12. CHECK APPROPRIATE BOX(s) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION

TYPE OF ACTION

☒ Notice of Intent☐ Abandonment☐ Change of Plans☐ Subsequent Report☐ Recompletion☐ New Construction☐ Final Abandonment Notice☐ Plugging Back☐ Non-Routine Fracturing☐ Casing Repair☐ Water Shut-Off☐ Altering Casing☐ Conversion to Injection☒ Other Replace water injection line

(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

13. Describe Proposed or Completed Operations (Clearly state all pertinent details and give pertinent dates including estimated date of starting any proposed work. If well is directionally drilled give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

It is planned to replace the 2500' injection line from the water plant to the subject well with 3", Schedule 80 line pipe. The existing line is in poor condition and has had numerous leaks. The attached map shows the planned right-of-way, which will follow the existing one.

RECEIVED

MAY 26 1992

DIVISION OF
OIL GAS & MINING

14. I hereby certify that the foregoing is true and correct

SIGNED

Karen J. Riley

Title

Senior Production Engr

Date

4-29-92

(This space for Federal or State office use)

Assistant District Manager

Approved by

William C. Hanger

Title

for Minerals

Date

5/14/92

Condition of Approval, If any:

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statement or representations as to any matter within its jurisdiction.



State of Utah

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

Norman H. Bangerter
Governor

Dee C. Hansen
Executive Director

Dianne R. Nielson, Ph.D.
Division Director

355 West North Temple
3 Triad Center, Suite 350
Salt Lake City, Utah 84180-1203
801-538-5340

August 11, 1992

Meridian Oil Inc.
5613 DTC Parkway
Englewood, Colorado 80111

Gentlemen:

Re: Pressure Test for Mechanical Integrity, Class II Injection Wells in the Kiva and Kachina Units, San Juan County, Utah

The Underground Injection Control Program which the Division of Oil, Gas and Mining (DOGM) administers in Utah, requires that all Class II injection wells demonstrate mechanical integrity. It has been past policy of the Division to require pressure testing of all Class II salt water disposal wells and other injection wells not reporting monthly annulus pressures in accordance with rule R649-5-5.3 of the Oil and Gas Conservation General Rules. This rule requires that the casing-tubing annulus above the packer be pressure tested at a pressure equal to the maximum authorized injection pressure or 1,000 psi, whichever is lesser, provided that no test pressure is less than 300 psi. This test shall be performed at least every five year period beginning October, 1982. Our records indicate the above referenced wells are due for testing for the second five year period. Attached is a list of wells which need to be tested according to our records. Please make arrangements and ready the wells for testing during the week of September 21, 1992 as outlined below:

1. Operator must furnish connections, and accurate pressure gauges, hot oil truck (or other means of pressuring annulus), as well as personnel to assist in opening valves etc.
2. The casing-tubing annulus shall be filled prior to the test date to expedite testing, as each well will be required to hold pressure for a minimum of 15 minutes.
3. If mechanical difficulties or workover operations make it impossible for the wells to be tested on this date the tests may be rescheduled.

4. Company personnel should meet DOGM representatives at the field office or other location as negotiated.
5. All bradenhead valves with exception of the tubing on the injection wells must be shut in 24 hours prior to testing.

Please contact Mr. Dan Jarvis at (801)538-5340 to arrange a meeting time and place or negotiate a different date if this one is unacceptable.

Sincerely,



Gil Hunt
UIC Program Manager

Idc
Attachment
WOI52

WELLS TO BE TESTED

Kiva Unit

#14-4
21-9
23-4
12-4

Kachina Unit

#11-19
42-24
2

Utah Division of Oil, Gas, and Mining
Casing - ~~Bradenhead~~ ^{Pressure} Test

Operator: MERIDIAN OIL COMPANY Field/Unit: KACHINA
Well: HAVASU FED. 42-24 Township: 38S Range: 23E Sect: 24
API: 43-037-31298 Welltype: INJW Max Pressure: 3700
Lease type: FEDERAL Surface Owner: BLM

Test Date: 9/25/92

CASING STRING	SIZE	SET AT	PRESSURE	OBSERVATIONS
Surface:	8 5/8	1906		
Intermediate:		0		
Production:	5 1/2	6117		
Other:		0		
Tubing:	2 7/8		2480 PSI	
Packer:		0		

Recommendations:

Gil Hunt > Doborn
Dan Jarvis
Bob Vialpando - meridian

Pressured to 1000 PSI
held 15 min no loss
Passed MIT

D. Jarvis

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
Budget Bureau No. 1004-1135
Expires September 30, 1990

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to deepen or reentry to a different reservoir.
Use "APPLICATION FOR PERMIT—" for such proposals

SUBMIT IN TRIPLICATE

1. Type of Well
☐ Oil Well ☐ Gas Well ☒ Other

2. Name of Operator
Meridian Oil Inc.

3. Address and Telephone No.
Cortez, Colorado

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

Havasu Federal 42-24
SE of NE Sect. 24 T38S R23E

5. Lease Designation and Serial No.

6. If Indian, Affiliate or Tribe Name

7. If Unit or C.A. Agreement Designation

UTU-20895

8. Well Name and No.

Havasu Federal 42-24

9. API Well No.

43-037-31298

10. Field and Pool, or Exploratory Area

Kachina Field

11. County or Parish, State

San Jaun

12. **CHECK APPROPRIATE BOX(S) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA**

TYPE OF SUBMISSION

- ☒ Notice of Intent
☐ Subsequent Report
☐ Final Abandonment Notice

TYPE OF ACTION

- ☐ Abandonment
☐ Recompletion
☐ Plugging Back
☐ Casing Repair
☐ Altering Casing
☐ Other
☐ Change of Plans
☐ New Construction
☐ Non-Routine Fracturing
☐ Water Shut-Off
☐ Conversion to Injection

(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

13. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

Meridian Oil proposes to construct a biological treatment pad for the treatment of crude oil production waste. Refer to attached proposal and schematic.

Activity will commence by December 1, 1992.

For additional information please contact Lee Fyock at 1/303/930-9264.

**Accepted by the State
of Utah Division of
Oil, Gas and Mining**

Date: 11-17-92

By: ABF

RECEIVED

NOV 09 1992

**DIVISION OF
OIL GAS & MINING**

14. I hereby certify that the foregoing is true and correct

Signed

Lee Fyock

Title Environmental Specialist

Date

11/5/92

(This space for Federal or State office use)

Approved by

Federal Approval of this

Title

Date

Conditions of approval, if any:

Action is Necessary

NAVAJO FEDERAL 4-2 and HAVASU FEDERAL 42-24
BIO-DEGRADATION FACILITIES

Meridian Oil Inc. proposes to construct two bio-degradation facilities (bio-pads) for the biological treatment of crude oil contaminated soil, tank bottoms and other approved exempt oil production wastes. One pad is proposed for the Navajo Federal 4-2 and one at the Havasu Federal 42-24.

Site Preparation

Both locations currently have sufficient room to construct a 100 ft. by 150 ft. pad with out requiring additional disturbance to the well site. Each bio-pad will be graded on the level. The pads will be completely surrounded by earthen berms to prevent the runoff of storm water; refer to Figures 1 and 2.

Treatment Procedures

The only materials accepted for bio-remediation will be oil production RCRA exempt wastes generated by the Meridian Oil Inc. Cortez Area operations. All material brought to the sites for treatment will be recorded in a log book. The information recorded will contain the date, location, and approximate quantity of the material being treated.

Acceptable waste materials will include:

- Crude oil contaminated soils
- Crude oil tank bottoms
- Crude oil pit bottoms
- Other crude oil exempt wastes as approved by the BLM

All waste material will be evenly spread over the surface of the pad in lifts not exceeding six inches. Nutrients (agricultural fertilizers) will be spread over the material at agricultural rates and disced into the material with normal farm type equipment. Fresh water may be utilized at the initial spreading of the material if determined necessary by the operator.

Should composting techniques be required for certain wastes the procedures will include the addition of bulking agents such as wood chips, straw and manure. If composting is necessary the material will be heaped rather than evenly spread thus preserving heat and moisture.

Treatment will be considered complete when the TPH is below 1% as determined by approved EPA analytical methods. No material will be removed from the location without BLM approval.

SCHEMATIC

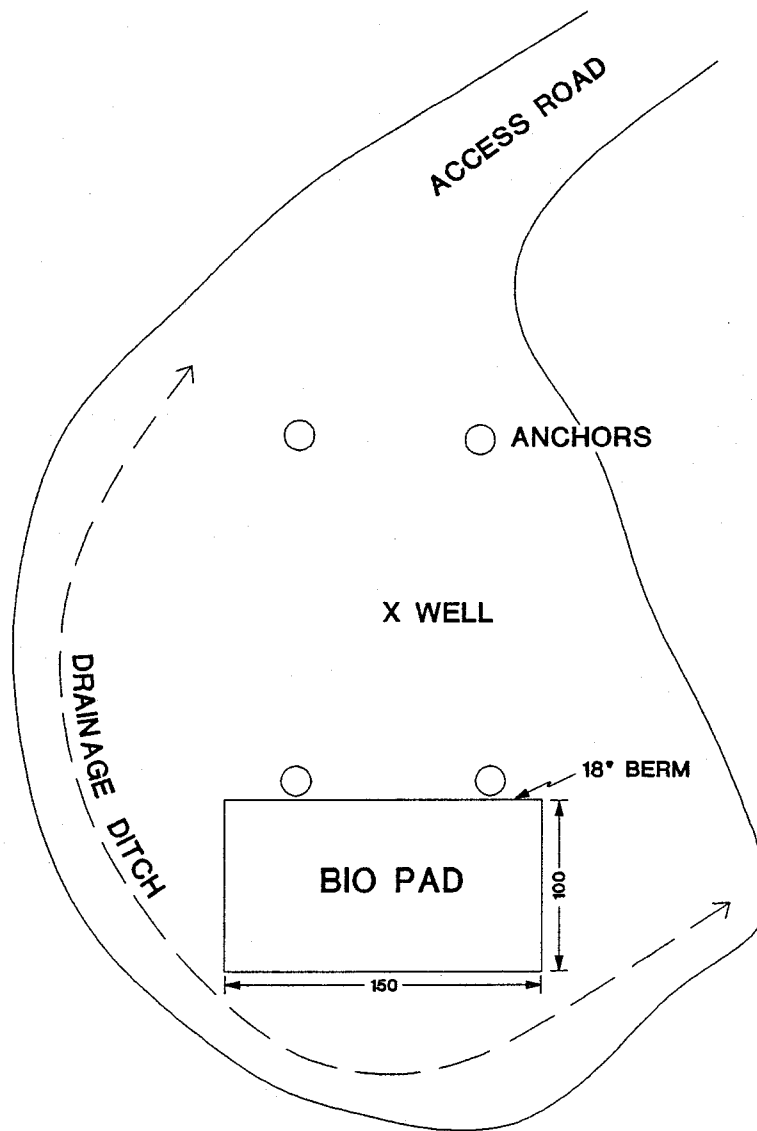
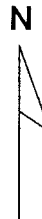


FIGURE 2. HAVASU FEDERAL 42-24 WELL SITE WITH PROPOSED BIO-PAD

Meridian Oil Inc. / Havasu Federal #2-24 (Kachina Field)

Evaluation Ranking Criteria and Ranking Score
Utah Division of Oil, Gas and Mining

Site-Specific Factors	Ranking Score	Final Ranking Score
Distance to Groundwater (feet) >100 100 to 75 75 to 50 50 to 25 25 to 10 <10, or recharge area	0 4 8 12 16 20	0
Native Soil Type: Low permeability Mod. permeability High permeability	0 10 20	Bentonite at surface 0
Annual Precipitation (inches) <10 10 to 20 >20	0 5 10	0
Distance to Nearest Municipal Production Well (feet) >5280 1320 to 5280 500 to 1320 <500	0 8 10 15	0
Distance to Other Wells (feet) >1320 300 to 1320 <300	0 5 10	0
Distance to Surface Water (feet) >1000 300 to 1000 <300	0 2 5	2
Affected Populations <100 100 to 300 >3000	0 10 20	0
Presence of Nearby Utility Conduits Not Present Unknown Present	0 14 15	0
Final Score		2

OK York 11/17/92

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

RECEIVED
MOAB DISTRICT OFFICE
93 MAR -5 AM 8:21

SUBMIT IN TRIPLICATE
FORM APPROVED
Budget Bureau No. 100-0135
Expires September 30, 1990

MAR 17 1993

5. Lease Designation and Serial No.

UTU20895

DIVISION OF
OIL GAS & MINING

SUNDRY NOTICES AND REPORTS ON WELLS

DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
Indian, Allottee or Tribe Name
N/A

Do not use this form for proposals to drill or to deepen or re-entry to a different reservoir. Use "Application for Permit: for such proposals.

1. Type of Well

Oil Gas Other Water Injection

2. Name of Operator

Meridian Oil Inc.

3. Address and Telephone No.

5613 DTC Parkway, Englewood, CO 80111 (303) 930-9300

4. Location of Well (Footage, Sec., T.R.M. or Survey Description)

SENE, 1970' FNL - 461' FEL

Sec. 19, T38S-R23E

Sec 24

7. If Unit or CA, Agreement Designation

8. Well Name and No.

HAVASU FEDERAL 42-24

9. API Well No.

43-037-31298

10. Field and Pool, Exploratory Area

Kachina

11. County or Parish, State

San Juan, Utah

12. CHECK APPROPRIATE BOX (S) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION

TYPE OF ACTION

☐ Notice of Intent

☐ Abandonment

☐ Change of Plans

☐ Recompletion

☐ New Construction

☒ Subsequent Report

☐ Plugging Back

☐ Non-Routine Fracturing

☐ Casing Repair

☐ Water Shut-Off

☐ Final Abandonment

☐ Altering Casing

☐ Conversion to Injection

☒ Other Install plastic liner

(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

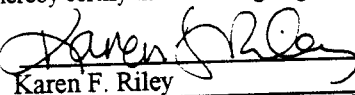
13. Described Proposed or Completed Operations (Clearly state all pertinent details and give pertinent dates including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

Work performed 10/7/92 to 10/18/92.

Install plastic liner in injection line to facilitate increased injection rates and pressures.

14. I hereby certify that the foregoing is true and correct.

Signed



Karen F. Riley

Title

Sr. Production Engineer

Date

February 12, 1993

(This space for Federal or State office use)

Approved By

ACCEPTED

Title

Branch of Fluid Minerals
Moab District

Date

MAR 8 1993

Condition of Approval, If any:

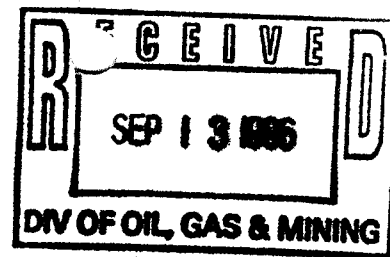
Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statement or representations as to any matter within its jurisdiction.

SUBMIT IN TRIPLICATE

STATE OF UTAH
INVENTORY OF INJECTION WELLS

OPERATOR	API NO.	WELL	TNS	RGE	SE	WELLTYPE	INDIAN COUNT
*****	*****	*****	***	***	**	*****	*****
EQUITABLE RE	43-013-31370	FEDERAL 13-5	09S	17E	5	INJW	Y
EQUITABLE RE	43-013-31195	ALLEN FEDERA	09S	17E	6	INJW	N
EQUITABLE RE	43-013-31492	11-7J	09S	17E	7	INJW	Y
EQUITABLE RE	43-013-31405	31-7J	09S	17E	7	INJW	Y
EQUITABLE RE	43-047-20252	E. RED WASH	08S	25E	5	INJW	N
EQUITABLE RE	43-047-20261	ERW 4-6	08S	25E	6	INJW	Y
EQUITABLE RE	43-047-32346	42-6X	08S	25E	6	INJW	N
EQUITABLE RE	43-047-20245	AMERADA GUIN	08S	25E	7	INJW	Y
GERRITY OIL	43-047-30566	FEDERAL 14-1	09S	24E	10	INJD	Y
GIANT EXPLOR	43-037-15042	GOTHIC MESA	41S	23E	16	INJD	Y
GIANT EXPLOR	43-037-31095	CAVE CANYON	38S	24E	3	INJW	N
GIANT EXPLOR	43-037-20292	SENTINEL PEA	41S	26E	27	INJD	Y
GIANT EXPLOR	43-037-16452	9-24	41S	23E	9	INJI	Y
HAY HOT OIL	43-037-30521	MCCRACKEN PT	40S	23E	19	INSD	N
HAY HOT OIL	43-037-30575	FED. 23-32	40S	22E	23	INJI	N
HELD BY PROD	43-013-15122	UTE #1-A	03S	06W	18	INJD	Y
INLAND PRODU	43-013-30843	MONUMENT BUT	08S	16E	34	INJW	Y
INLAND PRODU	43-013-30693	FEDERAL 3-33	08S	16E	33	INJW	N
INLAND PRODU	43-013-30686	FEDERAL 5-35	08S	16E	35	INJW	N
INLAND PRODU	43-013-30745	MONUMENT BUT	08S	16E	35	INJW	N
INLAND PRODU	43-013-30608	MONUMENT BUT	08S	16E	35	INJW	N
INLAND PRODU	43-013-30606	MONUMENT BUT	08S	16E	35	INJW	N
INLAND PRODU	43-013-31264	MONUMENT FED	08S	16E	35	INJW	N
INLAND PRODU	43-013-30605	MONUMENT BUT	08S	16E	35	INJW	N
INLAND PRODU	43-013-30624	STATE 5-36	08S	16E	36	INJW	N
INLAND PRODU	43-013-30592	STATE 1-36	08S	16E	36	INJW	N
INLAND PRODU	43-013-30787	12-32	08S	17E	32	INJW	Y
INLAND PRODU	43-013-31372	14A-28	08S	16E	28	INJW	N
INLAND PRODU	43-013-30779	FED 15-28	08S	16E	28	INJW	N
INLAND PRODU	43-013-31523	GILSONITE 14	08S	17E	32	INJW	Y
INLAND PRODU	43-013-31403	GILSONITE ST	08S	17E	32	INJW	Y
INLAND PRODU	43-013-30658	GILSONITE 7-	08S	17E	32	INJW	Y
JN EXPLORATI	43-043-30223	LOGAN FEDERA	03N	07E	26	INJD	N
MEDALLION EX	43-013-30372	ALTAMONT SWD	03S	06W	24	INJD	Y
✓ MERIDIAN OIL	43-037-31112	NAV FED 4-1	39S	25E	4	INJW	N
✓ MERIDIAN OIL	43-037-31321	14-4 NAV.FED	39S	25E	4	INJW	N
✓ MERIDIAN OIL	43-037-31395	NAVAJO FEDER	39S	25E	4	INJW	N
✓ MERIDIAN OIL	43-037-31259	FEDERAL 23-4	39S	25E	4	INJW	N
✓ MERIDIAN OIL	43-037-31267	21-9 NAV.FED	39S	25E	9	INJW	N
→ MERIDIAN OIL ←	43-037-31298	HAVASU FED.	38S	23E	24	INJW	N
✓ MERIDIAN OIL	43-037-31282	ARABIAN FED.	38S	24E	19	INJW	N
✓ MERIDIAN OIL	43-037-31458	HAVASU FED.	38S	24E	19	INJW	N
MISSION OIL	43-013-31202	UTE 25-6	05S	04W	25	INJI	Y
MOBIL EXPLOR	43-037-16350	H-11	40S	24E	36	INJW	Y
MOBIL EXPLOR	43-037-15617	F-11	40S	24E	36	INJW	Y
MOBIL EXPLOR	43-037-15618	G-12	40S	24E	36	INJI	Y
MOBIL EXPLOR	43-037-15619	I-12	40S	24E	36	INJW	Y
MOBIL EXPLOR	43-037-16377	T-8	40S	25E	28	INJW	Y
MOBIL EXPLOR	43-037-16366	P-7	40S	25E	29	INJW	Y
MOBIL EXPLOR	43-037-16362	N-7	40S	25E	29	INJW	Y
MOBIL EXPLOR	43-037-16359	L-9	40S	25E	31	INJW	Y
MOBIL EXPLOR	43-037-16354	J-11	40S	25E	31	INJW	Y
MOBIL EXPLOR	43-037-15958	L-11	40S	25E	31	INJW	Y
✓ MERIDIAN OIL	43-037-31317	NAV.FED. 43-5	39S	25E	4	INJW	N

MERIDIAN OIL



September 10, 1996

State of Utah
Division of Oil, Gas and Mining
355 ~~1594~~ West North Temple
Salt Lake City, UT 84180

Re: Name Change from Meridian Oil Inc. to
Burlington Resources Oil & Gas Co.

Gentlemen:

Please be advised effective July 11, 1996 Meridian Oil Inc. changed their name and address to:

Burlington Resources Oil & Gas Co.
3300 North "A" St., Bldg. 6
Midland, TX 79710-1810

Please see the attached list of wells that Burlington Resources operates in the State of Utah. If you should have any questions, please contact me at (303) 930-9393 or after September 30th at (915) 688-6800.

Sincerely,

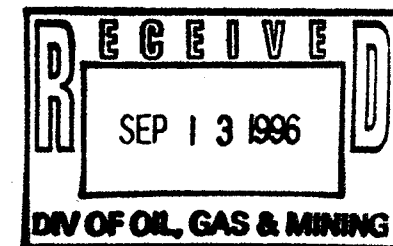
BURLINGTON RESOURCES OIL & GAS CO.

A handwritten signature in cursive script, reading "Eileen Danni Dey".

Eileen Danni Dey
Senior Regulatory Compliance Representative

Enclosure

FIELD	WELL NAME	WELL NO	FORMATION/POOL	COUNTY	OCATIO	SEC	TWN	RGE	API NUMBER	FEDERAL LEASE NUMBER	STATE CONTROL NO.
BANNOCK	BANNOCK FEDERAL	21-33	ISMAY	SAN JUAN	NENW	33	038S	024E	43-037-3142500	UTU60786A	10923
CEDAR MOUNTAIN	EAST CANYON UNIT	33-18	CEDAR MOUNTAIN	GRAND	NWSE	18	016S	025E	43-019-1620300	UTU05059	9515
EAST MOUNTAIN	EAST MOUNTAIN FEDERAL	13-35	FERRON	EMERY	NWSW	35	016S	006E	43-015-3023000	57287U6920	10789
EAST MOUNTAIN	EAST MOUNTAIN FEDERAL	32-23	FERRON	EMERY	SWNE	23	016S	006E	43-015-3023100	57287U6920	11075
FERRON	INDIAN CREEK UNIT	1	FERRON	EMERY	SWNW	02	017S	006E	43-015-3008200	57287U6920	02585
FERRON	INDIAN CREEK UNIT	3	FERRON	EMERY	SWSW	02	017S	006E	43-015-3107500	57287U6920 30175	02585
FERRON	INDIAN CREEK UNIT 10176	5	FERRON	EMERY	SENE	10	017S	006E	43-015-3011700	57287U6920	02585
FERRON	INDIAN CREEK UNIT 14176	2	FERRON	EMERY	SWNE	14	017S	006E	43-015-3009100	UTU15202	10907
KACHINA	ARABIAN FEDERAL (W1W)	2	ISMAY	SAN JUAN	NWSW	19	038S	024E	43-037-3128200	UTU56186	10654
KACHINA	ARABIAN FEDERAL	3	ISMAY	SAN JUAN	NESW	19	038S	024E	43-037-3128700	UTU56186	10654
KACHINA	HAVASU FEDERAL (W1W)	11-19	UPPER ISMAY	SAN JUAN	NWNW	19	038S	024E	43-037-3145800	UTU56186	10654
KACHINA	HAVASU FEDERAL	12-19	UPPER ISMAY	SAN JUAN	SWNW	19	038S	024E	43-037-3145700	UTU56186	10654
KACHINA	HAVASU FEDERAL	12-19A	ISMAY	SAN JUAN	SWNW	19	038S	024E	43-037-3145900	UTU56186	10654
KACHINA	HAVASU FEDERAL	22-19	UPPER ISMAY	SAN JUAN	SENE	19	038S	024E	43-037-3127800	UTU56186	10654
KACHINA	HAVASU FEDERAL	41-24	UPPER ISMAY	SAN JUAN	NENE	24	038S	023E	43-037-3127900	UTU20895	10654
KACHINA	HAVASU FEDERAL (W1W)	42-24	UPPER ISMAY	SAN JUAN	SENE	24	038S	023E	43-037-3129800	UTU20895	10654
KACHINA	WASH UNIT (W5W)	2	CUTLER	SAN JUAN	SESE	13	038S	023E	43-037-3132400	UTU20894	10654
KIVA (DESERT CREEK)	NAVAJO FEDERAL	41-5	DESERT CREEK	SAN JUAN	NENE	05	039S	025E	43-037-3142100	UTU57895 31258	10810
KIVA (UPPER ISMAY)	KIVA FEDERAL	24-4	ISMAY	SAN JUAN	SESW	04	039S	025E	43-037-3174500	83687U6890	09975
KIVA (UPPER ISMAY)	NAVAJO FEDERAL (W1W)	12-4	ISMAY	SAN JUAN	SWNW	04	039S	025E	43-037-3139500	83687U6890	09975
KIVA (UPPER ISMAY)	NAVAJO FEDERAL (W1W)	14-4	ISMAY	SAN JUAN	SWSW	04	039S	025E	43-037-3132100	83687U6890	09975
KIVA (UPPER ISMAY)	NAVAJO FEDERAL (W1W)	21-9	ISMAY	SAN JUAN	NENW	09	039S	025E	43-037-3126700	83687U6890	09975
KIVA (UPPER ISMAY)	NAVAJO FEDERAL (W1W)	23-4	UPPER ISMAY	SAN JUAN	NESW	04	039S	025E	43-037-3125900	83687U6890	09975
KIVA (UPPER ISMAY)	NAVAJO FEDERAL	4-2	ISMAY	SAN JUAN	SWSE	04	039S	025E	43-037-3116100	83687U6890	09975
KIVA (UPPER ISMAY)	NAVAJO FEDERAL	4-4	ISMAY	SAN JUAN	NWSW	04	039S	025E	43-037-3117900	83687U6890	09975
KIVA (UPPER ISMAY)	NAVAJO FEDERAL	42-5	UPPER ISMAY	SAN JUAN	SENE	05	039S	025E	43-037-3126100	83687U6890	10655
KIVA (UPPER ISMAY)	NAVAJO FEDERAL (W5W)	42-9	WINGATE/CUTLER	SAN JUAN	SENE	09	039S	025E	43-037-3126300	83687U6890	09975
KIVA (UPPER ISMAY)	NAVAJO FEDERAL	9-1	UPPER ISMAY	SAN JUAN	NWNE	09	039S	025E	43-037-3100100	83687U6890	09975
KIVA (UPPER ISMAY)	NAVAJO FEDERAL (WIW)	4-1	ISMAY	SAN JUAN	SESW	04	039S	025E	43-037-3111200	83687U6890	09975
KIVA (UPPER ISMAY)	NAVAJO FEDERAL (WIW)	43-5	ISMAY	SAN JUAN	NWSW	05	039S	025E	43-037-3131700	83687U6890	09975
IRON MESA	HATCH POINT FEDERAL	27-1A	CANE CREEK	SAN JUAN	NESW	27	027S	021E	43-037-3051800	8910184250	02815

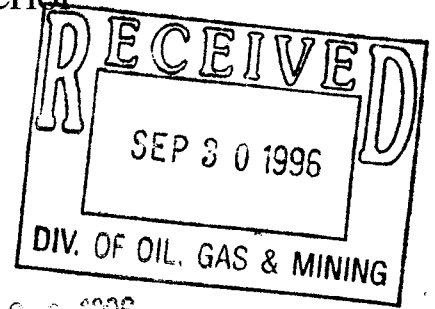




United States Department of the Interior

BUREAU OF LAND MANAGEMENT

Utah State Office
P.O. Box 45155
Salt Lake City, UT 84145-0155



SEP 28 1996

In Reply Refer To
3100
SL-071010C
(UT-932)

NOTICE

Burlington Resources Oil & Gas Company	:	Oil and Gas
801 Cherry Street, Suite 900	:	SL-071010C
Fort Worth, Texas 76102	:	

Corporate Name Change Recognized

Acceptable evidence has been filed in this office concerning the corporate name change from Meridian Oil Inc. to Burlington Resources Oil & Gas Company.

For our purposes, the name change is recognized effective July 12, 1996, the date the Secretary of State of Delaware certified the name change.

The oil and gas lease files identified on the enclosed exhibit have been noted as to the name change. We are notifying the Minerals Management Service and all applicable Bureau of Land Management offices of the change by a copy of this notice. If additional documentation for changes of operator are required by our field offices, you will be contacted by them.

A rider to Bond No. 400IA9059 (BLM Bond No. MT0719) has been accepted by the Montana State office as of September 16, 1996, its date of receipt. The rider changed the name on the bond from Meridian Oil Inc. to Burlington Resources Oil & Gas Company.

ROBERT LOPEZ

Robert Lopez
Group Leader,
Minerals Adjudication Group

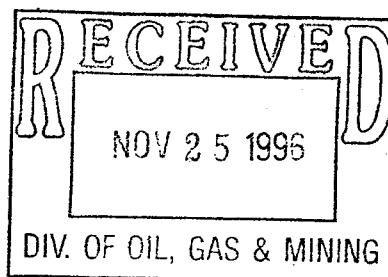
Enclosure
Exhibit (1 p)

cc: MMS, Data Management Division, P.O. Box 5860, MS 3113, Denver, Colorado 80217
Moab District Office
Vernal District Office

bc: State of Utah, ATTN: Lisha Cordova, Division of Oil, Gas and Mining, P.O. Box 145801,
Salt Lake City, Utah 84114-5801
Teresa Thompson (UT-931)
Irene Anderson (UT-932)

Exhibit of Leases Affected

SL-071010C	U-8894A	U-40751	U-61752
SL-071595	U-8895A	U-45051	U-62143
U-0681	U-8897A	U-45929	U-62190
U-0683	U-15202	U-46825	U-63181
U-0684	U-15203	U-51045	UTU-64930
U-0685	U-15204	U-51046	UTU-64931
U-0719	U-16962A	U-51047	UTU-65329
U-0725	U-17024	U-52333	UTU-65607
U-0737	U-17623	U-56186	UTU-65750
U-0741	U-19281	U-56932	UTU-65751
U-0744	U-20016	U-56933	UTU-65868 (ROW)
U-03333	U-20895	U-56934	UTU-65940
U-04049	U-24606	U-57895	UTU-65943
U-04049A	U-39832	U-58728	UTU-66025
U-05059	U-40361	U-60428	UTU-66487
U-08107	U-40440	U-60520	UTU-66584
U-062420	U-40544 (ROW)	U-61556	UTU-66708
UTU-66830	UTU-66831	UTU-67565	UTU-67568
UTU-67569	UTU-67570	UTU-68232	UTU-68664
UTU-68676	UTU-69434	UTU-70115 (ROW)	UTU-70196
UTU-72660	U-60786X (Bannock Unit)	U-63089X (East Mountain Unit)	

STATE OF UTAH
DIVISION OF OIL, GAS AND MINING

TRANSFER OF AUTHORITY TO INJECT - UIC FORM 5

Well name and number: _____
Field or Unit name: KACHINA UNIT API no. _____
Well location: QQ _____ section _____ township 38S range 23+24E county SAN JUAN
Effective Date of Transfer: 7/11/96

CURRENT OPERATOR

Transfer approved by:

Name EILEEN DANNI DEY Company MERIDIAN OIL INC.
Signature Eileen Danni Dey Address 5613 DTC PARKWAY
Title SR. REGULATORY COMPLIANCE REPRESENTATIVE ENGLEWOOD, CO. 80111
Date 10/30/96 Phone (303) 930-9393

Comments:

NAME CHANGE ONLY

NEW OPERATOR

Transfer approved by:

Name EILEEN DANNI DEY Company BURLINGTON RESOURCES
Signature Eileen Danni Dey Address P.O. Box 51810
Title SR. REGULATORY COMPLIANCE REPRESENTATIVE MIDLAND, TX 79705-1810
Date 10/30/96 Phone (915) 688-9042

Comments:

Name Change only

(State use only)

Transfer approved by [Signature] Title Environ ManagerApproval Date 10-31-96

**BURLINGTON RESOURCES
MID-CONTINENT DIVISION**

**3300 NO. A STREET, BLDG. 6 (79705)
P.O. BOX 51810
MIDLAND, TEXAS 79710-1810**

**DRILLING DEPARTMENT
FAX NO. 915/688-6009**

DATE: 10/30 TIME: _____
TO: Lisha FAX NO: (801) 359-3940
CITY/STATE: SLE, UT
FROM: Eileen Day PHONE: (915) 688-9042
NO. OF PAGES (Including Cover Sheet): 3

SPECIAL INSTRUCTIONS: _____

Sorry so late!!

Call me if you need
anything else!

OPERATOR CHANGE WORKSHEET

Attach all documentation received by the division regarding this change.

Initial each listed item when completed. Write N/A if item is not applicable.

Routing:

1-LEC	6-LEC
2-GLH	7-KDR
3-DTS	8-SJ
4-VLD	9-FILE
5-RJF	

☒ Change of Operator (~~well sold~~)☐ Designation of Agent☐ Designation of Operator☒ Operator Name Change ~~Only~~The operator of the well(s) listed below has changed, effective: 7-11-96TO: (new operator) BURLINGTON RESOURCES O&G CO.(address) 3300 N "A" ST BLDG 6MIDLAND TX 79710-1810EILEEN DANNI DEYPhone: (915)688-6800Account no. N7670FROM: (old operator) MERIDIAN OIL INC(address) PO BOX 3209ENGLEWOOD CO 80155-3209EILEEN DANNI DEYPhone: (303)930-9393Account no. N7230

WELL(S) attach additional page if needed:

***KACHINA, KIVA, EAST MOUNTAIN, BANNOCK UNIT'S**

Name: **SEE ATTACHED**	API: _____	Entity: _____	S _____	T _____	R _____	Lease: _____
Name: _____	API: _____	Entity: _____	S _____	T _____	R _____	Lease: _____
Name: _____	API: _____	Entity: _____	S _____	T _____	R _____	Lease: _____
Name: _____	API: _____	Entity: _____	S _____	T _____	R _____	Lease: _____
Name: _____	API: _____	Entity: _____	S _____	T _____	R _____	Lease: _____
Name: _____	API: _____	Entity: _____	S _____	T _____	R _____	Lease: _____
Name: _____	API: _____	Entity: _____	S _____	T _____	R _____	Lease: _____

OPERATOR CHANGE DOCUMENTATION

- 1 1. (r649-8-10) Sundry or other legal documentation has been received from the **FORMER** operator (attach to this form). *(Rec'd 9-13-96)*
- 2 2. (r649-8-10) Sundry or other legal documentation has been received from the **NEW** operator (Attach to this form). *(Rec'd 9-13-96)*
- 3 3. The Department of Commerce has been contacted if the new operator above is not currently operating any wells in Utah. Is the company registered with the state? (yes/no) ____ If yes, show company file number: #096593. *(Eff. 1-24-82)*
- 4 4. **FOR INDIAN AND FEDERAL WELLS ONLY.** The BLM has been contacted regarding this change. Make note of BLM status in comments section of this form. BLM approval of Federal and Indian well operator changes should ordinarily take place prior to the division's approval, and before the completion of steps 5 through 9 below.
- 5 5. Changes have been entered in the Oil and Gas Information System (3270) for each well listed above. *(i.e. UIC Program)*
- 6 6. Cardex file has been updated for each well listed above. *(10-3-96)*
- 7 7. Well file labels have been updated for each well listed above. *(10-3-96)*
- 8 8. Changes have been included on the monthly "Operator, Address, and Account Changes" memo for distribution to Trust Lands, Sovereign Lands, UGS, Tax Commission, etc. *(10-3-96)*
- 9 9. A folder has been set up for the Operator Change file, and a copy of this page has been placed there for reference during routing and processing of the original documents.

ENTITY REVIEW

- See 1. (r649-8-7) Entity assignments have been reviewed for all wells listed above. Were entity changes made? (yes/no) no If entity assignments were changed, attach copies of Form 6, Entity Action Form.
- N/A 2. Trust Lands, Sovereign Lands, Tax Commission, etc., have been notified through normal procedures of entity changes.

BOND VERIFICATION - (FEE WELLS ONLY)

* 961002 "Rider" 80,000 to Burlington held by Trust Lands Admin.

- See 1. (r649-3-1) The NEW operator of any ~~fee~~ lease well listed above has furnished a proper bond.
- N/A 2. A copy of this form has been placed in the new and former operator's bond files.
- N/A 3. The FORMER operator has requested a release of liability from their bond (yes/no) no, as of today's date 11/16/96. If yes, division response was made to this request by letter dated .

LEASE INTEREST OWNER NOTIFICATION OF RESPONSIBILITY

- N/A 1. Copies of documents have been sent on to at Trust Lands for changes involving State leases, in order to remind that agency of their responsibility to review for proper bonding.

FILMING

- W 1. All attachments to this form have been microfilmed. Today's date: 12-27-96.

FILING

1. Copies of all attachments to this form have been filed in each well file.
2. The original of this form, and the original attachments are now being filed in the Operator Change file.

COMMENTS

MONTHLY OIL AND GAS PRODUCTION REPORT

OPERATOR NAME AND ADDRESS:

MARALENE SPAWN
BURLINGTON RESOURCES O&G
3300 N A ST BLDG 6
MIDLAND TX 79710-1810

UTAH ACCOUNT NUMBER: N7670REPORT PERIOD (MONTH/YEAR): 2 / 97AMENDED REPORT ☐ (Highlight Changes)

Well Name API Number Entity Location	Producing Zone	Well Status	Days Oper	Production Volumes		
				OIL(BBL)	GAS(MCF)	WATER(BBL)
✓ HAVASU FEDERAL 12-19 4303731457 10654 38S 24E 19	ISMV			U-56186	Kachina Unit	Sec. Recovery
✓ HAVASU FEDERAL 12-19A 4303731459 10654 38S 24E 19	ISMV			U-56186	"	
✓ NAVAJO FEDERAL 42-5 4303731261 10655 39S 25E 5	ISMV			U-58728		
✓ NAVAJO FEDERAL 41-5 4303731358 10810 39S 25E 5	DSCR			U-57895		
✓ INDIAN CREEK 14176 #1 4301530091 10907 17S 06E 14	FRSD			U-15202		
✓ BANNOCK-FEDERAL 21-33 4303731425 10923 38S 24E 33	ISMV			U-40361		
4303731425 10923 38S 24E 33 4303731324 99990 38S 23E 13	SPMP / WSW			U-20894	* BLM aprv. 4-23-97.	
✓ Arabian Federal 21 4303731282 10654 38S 24E 19	ISMV / W1W			U-56186	Kachina Unit	Sec. Recovery
✓ Havasu Federal 11-19 4303731458 10654 38S 24E 19	ISMV / W1W			U-56186	"	
✓ Havasu Federal 42-24 4303731298 10654 38S 23E 24	ISMV / W1W			U-20895	"	
TOTALS						

REMARKS:

I hereby certify that this report is true and complete to the best of my knowledge.

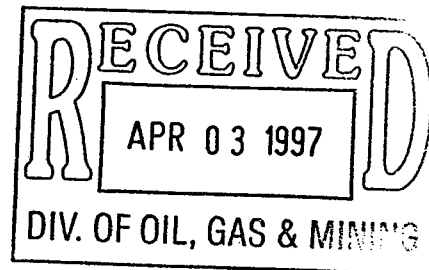
Date: _____

Name and Signature: _____

Telephone Number: _____

MERIT ENERGY COMPANY

12222 MERIT DRIVE, SUITE 1500
DALLAS, TEXAS 75251
(972) 701-8377
(972) 960-1252 Fax



April 2, 1997

**Utah Division of Oil, Gas and Mining
Attn: Ms. Lisha Cordova
1594 West North Temple
Suite 1210
Salt Lake City, Utah 84114**

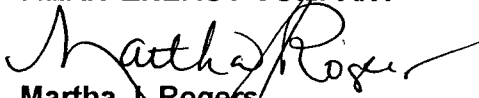
**RE: Change of Operator to Merit Energy Company
Emery and San Juan County**

Dear Ms. Cordova:

Enclosed please find a copy of Form 3160 executed by both parties, Merit Energy and Burlington Resources.

If additional information or forms are required to process this transaction, please contact me at 972-701-8377.

**Yours very truly,
MERIT ENERGY COMPANY**


**Martha J. Rogers
Manager, Regulatory Affairs**

CHANGE OF OPERATOR STATE OF - UT

COUNTY	FIELD NAME	WELL NAME	STR	LSE#	WELLTYPE	APIWELL	COMM NO.	FED CNTRL	ST CNTRL
EMERY	EAST MOUNTAIN ,FERRON	EAST MOUNTAIN FEDERAL 13-35	35 016S 006E	ML-27626	GAS WELL	43,015,3023000	UT060P49-87U69	57287U6920	025 <i>U56193</i>
EMERY	EAST MOUNTAIN ,FERRON	EAST MOUNTAIN FEDERAL 32-23	23 016S 006E		GAS WELL	43,015,3023100	UT060P49-87U69	57287U6920	025 <i>U17624</i>
EMERY	FERRON ,FERRON	INDIAN CREEK 021762 3	02 017S 006E	ML-27626	GAS WELL	43,015,3017500		57287U6920	025 <i>U15204</i>
EMERY	FERRON ,FERRON	INDIAN CREEK 1	02 017S 006E	ML-27626	GAS WELL	43,015,3008200		57287U6920	025 <i>U15206</i>
EMERY	FERRON ,FERRON	INDIAN CREEK 10176 5	10 017S 006E	ML-27626	GAS WELL	43,015,3011700		57287U6920	025 <i>U15203</i>
EMERY	FERRON ,FERRON	INDIAN CREEK 14176 1	14 017S 006E	UTU15202	GAS WELL	43,015,3009100		UTU15202	109 <i>U15202</i>
SAN JUAN	BANNOCK ,ISMAY	BANNOCK FEDERAL 21-33	33 038S 024E	UTU60786	OIL WELL	43,037,3142500	60786A	UTU60786A	109 <i>U46361</i>
SAN JUAN	KACHINA ,CUTLER	WASH UNIT 2	13 038S 023E	UTU20894	WATER SOURCE	43,037,3132400		UTU20894	106 <i>U20894 (To Water Rights 4-7-97)</i>
SAN JUAN	KACHINA ,ISMAY	ARABIAN FEDERAL 2	19 038S 024E	UTU56186	WATER INJECTED	43,037,3128200		UTU56186	106 <i>U56186</i>
SAN JUAN	KACHINA ,ISMAY	HAVASU FEDERAL 11-19	19 038S 024E	UTU56186	WATER INJECTED	43,037,3145800		UTU56186	106 <i>U56186</i>
SAN JUAN	KACHINA ,ISMAY	HAVASU FEDERAL 12-19	19 038S 024E	UTU56186	OIL WELL	43,037,3145700		UTU56186	106 <i>U56186</i>
SAN JUAN	KACHINA ,ISMAY	HAVASU FEDERAL 12-19A	19 038S 024E	UTU56186	OIL WELL	43,037,3145900		UTU56186	106 <i>U56186</i>
SAN JUAN	KACHINA ,ISMAY	HAVASU FEDERAL 22-19	19 038S 024E	UTU56186	OIL WELL	43,037,3127800		UTU56186	106 <i>U56186</i>
SAN JUAN	KACHINA ,ISMAY	HAVASU FEDERAL 41-24	24 038S 023E	UTU20895	OIL WELL	43,037,3127900		UTU20895	106 <i>U20895</i>
SAN JUAN	KACHINA ,ISMAY	HAVASU FEDERAL 42-24	24 038S 023E	UTU20895	WATER INJECTED	43,037,3129800		UTU20895	106 <i>U20895</i>

CHANGE OF OPERATOR STATE OF - UT

COUNTY	FIELD NAME	WELL NAME	STR	LSE#	WELLTYPE	APIWELL	COMM NO.	FED CNTRL	ST CNTRL
SAN JUAN	KACHINA, JSMAY-DESERT CREEK	ARABIAN FEDERAL 3	19 038S 024E	UTU58186	OIL WELL	43,037,3128700		UTU58186	106 <i>U56186</i>
SAN JUAN	KIVA (UPPER ISMAY), CUTLER	NAVAJO FEDERAL 42-9	09 039S 025E	U-52333	WATER SOURCE	43,037,3126300			<i>U52333 (to water rights 4797)</i>
SAN JUAN	KIVA (UPPER ISMAY), ISMAY	KIVA FEDERAL 24-4	04 039S 025E		OIL WELL	43,037,3174500		83687U6890	099 <i>USA-U52333</i>
SAN JUAN	KIVA (UPPER ISMAY), JSMAY	NAVAJO FEDERAL (WTW) 4-1	04 039S 025E		WATER INJECTED	43,037,3111200		83687U6890	099 <i>U52333</i>
SAN JUAN	KIVA (UPPER ISMAY), JSMAY	NAVAJO FEDERAL (WTW) 43-5	04 039S 025E		WATER INJECTED	43,037,3131700		83687U6890	099 <i>U58728</i>
SAN JUAN	KIVA (UPPER ISMAY), ISMAY	NAVAJO FEDERAL 12-4	04 039S 025E		WATER INJECTED	43,037,3139500		83687U6890	099 <i>U52333</i>
SAN JUAN	KIVA (UPPER ISMAY), ISMAY	NAVAJO FEDERAL 14-4	04 039S 025E		WATER INJECTED	43,037,3132100		83687U6890	099 <i>U52333</i>
SAN JUAN	KIVA (UPPER ISMAY), ISMAY	NAVAJO FEDERAL 21-9	09 039S 025E		WATER INJECTED	43,037,3126700		83687U6890	099 <i>U52333</i>
SAN JUAN	KIVA (UPPER ISMAY), JSMAY	NAVAJO FEDERAL 23-4	04 039S 025E		WATER INJECTED	43,037,3125900		83687U6890	099 <i>U52333</i>
SAN JUAN	KIVA (UPPER ISMAY), JSMAY	NAVAJO FEDERAL 4-1	04 039S 025E		OIL WELL	43,037,3111200		83687U6890	099 <i>U52333</i>
SAN JUAN	KIVA (UPPER ISMAY), JSMAY	NAVAJO FEDERAL 4-2	04 039S 025E		OIL WELL	43,037,3116100		83687U6890	099 <i>U52333</i>
SAN JUAN	KIVA (UPPER ISMAY), JSMAY	NAVAJO FEDERAL 4-4	04 039S 025E		OIL WELL	43,037,3117800		83687U6890	099 <i>U52333</i>
SAN JUAN	KIVA (UPPER ISMAY), ISMAY	NAVAJO FEDERAL 42-5	05 039S 025E		OIL WELL	43,037,3126100		83687U6890	106 <i>U58728</i>
SAN JUAN	KIVA (UPPER ISMAY), ISMAY	NAVAJO FEDERAL 43-5	04 039S 025E		OIL WELL	43,037,3131700		83687U6890	099 <i>U58728</i>
SAN JUAN	KIVA (UPPER ISMAY), ISMAY	NAVAJO FEDERAL 9-1	09 039S 025E		OIL WELL	43,037,3100100		83687U6890	099 <i>U52333</i>
SAN JUAN	KIVA (UPPER ISMAY), WINGATE	NAVAJO FEDERAL 42-9	09 039S 025E		WATER SOURCE	43,037,3126300		83687U6890	099 <i>U52333 (to water rights 4747)</i>

CHANGE OF OPERATOR STATE OF - UT

COUNTY	FIELD NAME	WELL NAME	STR	LSE#	WELLTYPE	APIWELL	COMM NO.	FED CNTRL	ST CNTRL
SAN JUAN	KIVA, DESERT CREEK	NAVAJO FEDERAL 41-5	05 039S 025E	UTU57895	OIL WELL	43,037,3135800		UTU57895	108 <i>U57895</i>
SAN JUAN	LION MESA, CANE CREEK	HATCH POINT FEDERAL 27-1A	27 027S 021E	UTU20016	OIL WELL	43,037,3051600		UTU20016	028 <i>U20016</i>

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
Budget Bureau No. 1004-0135
Expires March 31, 1993

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to deepen or re-entry to a different reservoir.
Use "APPLICATION FOR PERMIT-" for such proposals.

SUBMIT IN TRIPLICATE

1. Type of Well

☐ Oil Well ☐ Gas Well ☒ Other

2. Name of Operator

BURLINGTON RESOURCES OIL & GAS COMPANY

3. Address and Telephone No (915)688-6800

P. O. BOX 51810, MIDLAND, TX 79710-1810

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

1970' FNL - 461' FEL, SENE

24 038S 023E, SLM

5. Lease Designation and Serial No.
UTU20895

6. If Indian, Allottee or Tribe Name

7. If Unit or CA, Agreement Designation

8. Well Name and No.

HAVASU FEDERAL 42-24

9. API Well No.

43,037,3129800

10. Field and Pool, or Exploratory Area

KACHINA, ISMAY

11. County or Parish, State

SAN JUAN, UT

12. CHECK APPROPRIATE BOX(s) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION

☐ Notice of Intent

☐ Subsequent Report

☐ Final Abandonment Notice

TYPE OF ACTION

☐ Abandonment

☐ Recompletion

☐ Plugging Back

☐ Casing Repair

☐ Altering Casing

☒ Other CHANGE OF OPERATOR

☐ Change of Plans

☐ New Construction

☐ Non-Routine Fracturing

☐ Water Shut-Off

☐ Conversion to Injection

☐ Dispose Water

(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

13. Described Proposed or Completed Operations (Clearly state all pertinent details and give pertinent dates including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

EFFECTIVE JANUARY 1, 1997, BURLINGTON RESOURCES OIL & GAS COMPANY, THE OPERATOR OF RECORD OF THE HAVASU FEDERAL 42-24 WELL, TRANSFERRED ALL OF ITS RIGHT, TITLE AND INTEREST IN SAID WELL TO MERIT PARTNERS, L.P. (AS TO 92.4%) AND MERIT ENERGY PARTNERS III, L.P. (AS TO 7.6%), C/O MERIT ENERGY COMPANY, 12222 MERIT DRIVE, DALLAS, TX 75251.

ON APRIL 1, 1997, MERIT ENERGY COMPANY, GENERAL PARTNER FOR MERIT PARTNERS, L.P. AND MERIT ENERGY PARTNERS III, L.P., WILL TAKE OVER PHYSICAL OPERATIONS OF SAID WELL ON BEHALF OF SAID LIMITED PARTNERSHIPS.

14. I hereby certify that the foregoing is true and correct.

Signed

Kent Beers

Title

Attorney-in-Fact

Date

March 31, 1997

(This space for Federal or State office use)

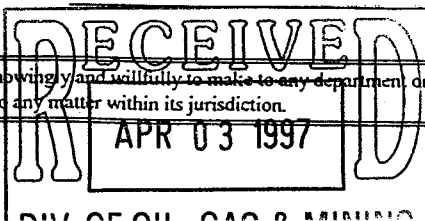
Approved By

Title

Date

Condition of Approval, If any:

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statement or representations as to any matter within its jurisdiction.



APR 21 1997

DIV. OF OIL, GAS & MINING

TRANSFER OF AUTHORITY TO INJECT - UIC FORM 5

Well name and number: HAVASU FEDERAL #42-24

Field or Unit name: KACHINA API no. 4303731298

Well location: QQ SENE section 24 township 38S range 23E county SAN JUAN

Effective Date of Transfer: April 1, 1997

CURRENT OPERATOR

Transfer approved by:

Name EILEEN DANNI DEY Company BURLINGTON RESOURCES OIL & GAS

Signature *Eileen Danni Dey* Address P.O. BOX 51810

Title REGULATORY COMPLIANCE SUPERVISOR MIDLAND, TX 79710-1810

Date 4-8-97 Phone (915) 688-9042

Comments: EFFECTIVE DATE OF SALE IS 1-1-97.
EFFECTIVE DATE OF TRANSFER OF OPERATIONS IS 4-1-97..

NEW OPERATOR

Transfer approved by:

Name Martha J. Rogers Company Merit Energy Company

Signature *Martha J. Rogers* Address 12222 Merit Drive

Title Manager, Regulatory Affairs Dallas, Texas 75251

Date April 15, 1997 Phone (972) 701-8377

Comments: Eff. date of sale is 1/1/97 and the eff. date of
transfer of operations is 4/1/97

(State use only)

Transfer approved by *STH P* Title *Environ. Mgr*

Approval Date 5-5-97

**970506 mailed copy to operators. Lee*

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
Budget Bureau No. 1004-0135
Expires March 31, 1993

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to deepen or re-entry to a different reservoir.
Use "APPLICATION FOR PERMIT-" for such proposals.

SUBMIT IN TRIPLICATE

1. Type of Well
☐ Oil Well ☐ Gas Well ☒ Other

2. Name of Operator
MERIT ENERGY COMPANY

3. Address and Telephone No (972) 701-8377
12222 MERIT DRIVE, DALLAS, TX 75251

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)
1970' FNL - 461' FEL, SENE
24 038S 023E, SLM

5. Lease Designation and Serial No.
UTU20895

6. If Indian, Allottee or Tribe Name

7. If Unit or CA, Agreement Designation

8. Well Name and No.
HAVASU FEDERAL 42-24

9. API Well No.
43,037,3129800

10. Field and Pool, or Exploratory Area
KACHINA, ISMAY

11. County or Parish, State
SAN JUAN, UT

12. CHECK APPROPRIATE BOX(s) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION

☐ Notice of Intent

☐ Subsequent Report

☐ Final Abandonment Notice

TYPE OF ACTION

<input type="checkbox"/> Abandonment	<input type="checkbox"/> Change of Plans
<input type="checkbox"/> Recompletion	<input type="checkbox"/> New Construction
<input type="checkbox"/> Plugging Back	<input type="checkbox"/> Non-Routine Fracturing
<input type="checkbox"/> Casing Repair	<input type="checkbox"/> Water Shut-Off
<input type="checkbox"/> Altering Casing	<input type="checkbox"/> Conversion to Injection
<input checked="" type="checkbox"/> Other <u>CHANGE OF OPERATOR</u>	<input type="checkbox"/> Dispose Water

(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

13. Described Proposed or Completed Operations (Clearly state all pertinent details and give pertinent dates including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

EFFECTIVE AS OF JANUARY 1, 1997, BURLINGTON RESOURCES OIL & GAS COMPANY, THE PRIOR OPERATOR OF RECORD, TRANSFERRED ALL RIGHT, TITLE AND INTEREST IN THE HAVASU FEDERAL 42-24 WELL TO MERIT PARTNERS, L.P. (AS TO 92.4%) AND MERIT ENERGY PARTNERS III, L.P. (AS TO 7.6%), C/O MERIT ENERGY COMPANY, 12222 MERIT DRIVE, DALLAS, TX 75251. ON APRIL 1, 1997, MERIT ENERGY COMPANY, THE GENERAL PARTNER FOR MERIT PARTNERS, L.P. AND MERIT ENERGY PARTNERS III, L.P., WILL TAKE OVER PHYSICAL OPERATIONS OF SAID WELL ON BEHALF OF SAID LIMITED PARTNERSHIPS AND IS CONSIDERED TO BE THE OPERATOR OF SAID WELL AS OF THAT DATE.

MERIT ENERGY COMPANY IS RESPONSIBLE UNDER THE TERMS AND CONDITIONS OF THE LEASE FOR THE OPERATIONS CONDUCTED UPON THE LEASED LANDS. BOND COVERAGE IN THE AMOUNT OF \$150,000 FOR MERIT ENERGY COMPANY IS PROVIDED UNDER BLM BOND NO. WY3011, IN FAVOR OF THE BUREAU OF LAND MANAGEMENT, U. S. DEPARTMENT OF THE INTERIOR.

14. I hereby certify that the foregoing is true and correct.

Signed Martha Rogers Title Manager, Regulatory Affairs Date March 31, 1997

(This space for Federal or State office use)
Brad D. Palmer

**Assistant Field Manager,
Resource Management**

Approved By _____ Date APR 28 1997
Condition of Approval, If any:

Merit Energy Company
Well No. Havasu Federal 42-24
SENE Sec. 24, T. 38 S., R. 23 E.
San Juan County, Utah

CONDITIONS OF APPROVAL

Approval of this application does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Be advised that Merit Energy Company is considered to be the operator of the above well and is responsible under the terms and conditions of the lease for the operations conducted on the leased land.

Bond coverage for this well is provided by BLM Bond WY3011 (Principle - Merit Energy Company) as provided for in 43 CFR 3104.2.

This office will hold the aforementioned operator and bond liable until the provisions of 43 CFR 3106.7-2 continuing responsibility are met.

OPERATOR CHANGE WORKSHEET

Attach all documentation received by the division regarding this change.

Initial each listed item when completed. Write N/A if item is not applicable.

Routing: <i>[initials]</i>	
1-LEC <i>[initials]</i>	6-MA <i>[initials]</i>
2-GLA <i>[initials]</i>	7-KAS <i>[initials]</i>
3-DPS <i>[initials]</i>	8-SI <i>[initials]</i>
4-VLD <i>[initials]</i>	9-FILE <i>[initials]</i>
5-JRB <i>[initials]</i>	

☒ Change of Operator (well sold)☐ Designation of Agent☐ Designation of Operator☐ Operator Name Change OnlyThe operator of the well(s) listed below has changed, effective: 4-1-97

TO: (new operator) MERIT ENERGY COMPANY
 (address) 12222 MERIT DR STE 1500
DALLAS TX 75251
MARTHA ROGERS
 Phone: (972) 701-8377
 Account no. N4900 (4-30-97)

FROM: (old operator) BURLINGTON RESOURCES O&G
 (address) 3300 N A ST BLDG 6
MIDLAND TX 79710-1810
MARALENE SPAWN
 Phone: (915) 688-6800
 Account no. N7670

WELL(S) attach additional page if needed:

*KACHINA UNIT (SECONDARY RECOVERY)

Name: **SEE ATTACHED**	API: <u>43-037-31218</u>	Entity: _____	S _____	T _____	R _____	Lease: _____
Name: _____	API: _____	Entity: _____	S _____	T _____	R _____	Lease: _____
Name: _____	API: _____	Entity: _____	S _____	T _____	R _____	Lease: _____
Name: _____	API: _____	Entity: _____	S _____	T _____	R _____	Lease: _____
Name: _____	API: _____	Entity: _____	S _____	T _____	R _____	Lease: _____
Name: _____	API: _____	Entity: _____	S _____	T _____	R _____	Lease: _____
Name: _____	API: _____	Entity: _____	S _____	T _____	R _____	Lease: _____

OPERATOR CHANGE DOCUMENTATION

- [initials]* 1. (r649-8-10) Sundry or other legal documentation has been received from the **FORMER** operator (attach to this form). *(Rec'd 4-3-97)*
- [initials]* 2. (r649-8-10) Sundry or other legal documentation has been received from the **NEW** operator (Attach to this form). *(Rec'd 4-3-97)*
- [initials]* 3. The **Department of Commerce** has been contacted if the **new** operator above is not currently operating any wells in Utah. Is the company registered with the state? **(yes/no)** ____ If yes, show company file number: #00198545. *(eff. 3-13-97)*
- [initials]* 4. **FOR INDIAN AND FEDERAL WELLS ONLY.** The BLM has been contacted regarding this change. Make note of BLM status in comments section of this form. BLM approval of **Federal** and **Indian** well operator changes should ordinarily take place prior to the division's approval, and before the completion of steps 5 through 9 below.
- [initials]* 5. Changes have been entered in the **Oil and Gas Information System** (3270) for each well listed above. *(4-30-97)*
- [initials]* 6. **Cardex** file has been updated for each well listed above. *(5-30-97)*
- [initials]* 7. Well **file labels** have been updated for each well listed above. *(5-30-97)*
- [initials]* 8. Changes have been included on the monthly "Operator, Address, and Account Changes" **memo** for distribution to Trust Lands, Sovereign Lands, UGS, Tax Commission, etc. *(4-30-97)*
- [initials]* 9. A folder has been set up for the **Operator Change file**, and a copy of this page has been placed there for reference during routing and processing of the original documents.

ENTITY REVIEW

- ___ 1. (r649-8-7) **Entity assignments have been reviewed** for all wells listed above. Were entity changes made? (yes/no) ___ If entity assignments were changed, attach copies of Form 6, Entity Action Form.
- ___ 2. Trust Lands, Sovereign Lands, Tax Commission, etc., have been **notified** through normal procedures of entity changes.

BOND VERIFICATION - (FEE WELLS ONLY)

- ___ 1. (r649-3-1) The **NEW** operator of any fee lease well listed above has furnished a proper bond.
- ___ 2. A **copy of this form** has been placed in the new and former operator's bond files.
- ___ 3. The **FORMER** operator has requested a release of liability from their bond (yes/no) ___, as of today's date _____. If yes, division response was made to this request by letter dated _____.

LEASE INTEREST OWNER NOTIFICATION OF RESPONSIBILITY

- N/A 1. Copies of documents have been sent on 01/16/97 to _____ at Trust Lands for changes involving State leases, in order to remind that agency of their responsibility to review for proper bonding.
- N/A 2. (r649-2-10) The former operator of any fee lease wells listed above has been contacted and informed by letter dated _____ 19 ___, of their responsibility to notify all interest owners of this change.

FILMING

- ✓ 1. All attachments to this form have been **microfilmed**. Today's date: 6-20-97.

FILING

- ___ 1. **Copies** of all attachments to this form have been filed in each **well file**.
- ___ 2. The **original of this form**, and the **original attachments** are now being filed in the Operator Change file.

COMMENTS

970430 BLM / Apr. 4-23-97.

Well Name: HAVASU FEDERAL 42-24 API Number: 43-037-31298

Qtr/Qtr: SE/NE Section: 24 Township: 38S Range: 23E

Company Name: MERIT ENERGY COMPANY

Lease: State Fee Federal X Indian

Inspector: J THOMPSON Date: 8/31/99 3:55 PM

Tubing - Rate: _____ Pressure: 1500 psi

Casing/Tubing Annulus - Pressure: 200 psi

Time (Minutes)

Annulus Pressure

Tubing Pressure

0

4

1500

5

1500

10



15

1

20

(

25

<

30

5

Results: Pass/Fail

Tubing Pressure: 1500 psi

Casing/Tubing Annulus Pressure: 0 psi

COMMENTS:

Operator Representative

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

FORM 9

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

1. TYPE OF WELL OIL WELL <input type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER _____		5. LEASE DESIGNATION AND SERIAL NUMBER: See attached
2. NAME OF OPERATOR: Merit Energy Company		6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
3. ADDRESS OF OPERATOR: 12222 Merit Dr., Suite _____ CITY Dallas STATE TX ZIP 75251		7. UNIT or CA AGREEMENT NAME: See attached
4. LOCATION OF WELL FOOTAGES AT SURFACE: See Attached		8. WELL NAME and NUMBER: See attached
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: _____		9. API NUMBER:
STATE: UTAH		10. FIELD AND POOL, OR WILDCAT: See attached

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> NOTICE OF INTENT (Submit in Duplicate) Approximate date work will start: _____	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> REPERFORATE CURRENT FORMATION
<input type="checkbox"/> SUBSEQUENT REPORT (Submit Original Form Only) Date of work completion: _____	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> SIDETRACK TO REPAIR WELL
	<input type="checkbox"/> CASING REPAIR	<input type="checkbox"/> NEW CONSTRUCTION	<input type="checkbox"/> TEMPORARILY ABANDON
	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input checked="" type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> TUBING REPAIR
	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> VENT OR FLARE
	<input type="checkbox"/> CHANGE WELL NAME	<input type="checkbox"/> PLUG BACK	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> PRODUCTION (START/RESUME)	<input type="checkbox"/> WATER SHUT-OFF
	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> OTHER: _____
	<input type="checkbox"/> CONVERT WELL TYPE	<input type="checkbox"/> RECOMPLETE - DIFFERENT FORMATION	

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

Merit Energy Company advises, effective 10-1 _____, 2000, Journey Operating, L.L.C. will become the operator of the wells on the attached list.

Journey Operating, L.L.C.
1201 Louisiana, Suite 1040
Houston, TX. 77002
(713) 655-0595

By: Brian A. Baer
Brian A. Baer, President

RECEIVED

OCT 20 2000

DIVISION OF
OIL, GAS AND MINING

NAME (PLEASE PRINT) <u>Arlene Valliquette</u>	TITLE <u>Manager - Regulatory Affairs</u>
SIGNATURE <u>Arlene Valliquette</u>	DATE <u>9/29/00</u>

(This space for State use only)

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

UIC FORM 5

TRANSFER OF AUTHORITY TO INJECT

Well Name and Number Havasu Federal #42-24		API Number 4303731298
Location of Well Footage : 1970' FNL & 461' FEL County : San Juan		Field or Unit Name Kachina
QQ, Section, Township, Range: SENE 24 38S 23E State : UTAH		Lease Designation and Number UTU-20895

EFFECTIVE DATE OF TRANSFER: 9/30/00

CURRENT OPERATOR

Company: Merit Energy Company
Address: 12222 Merit Dr., Suite 1500
city Dallas state TX zip 75251
Phone: (972) 701-8377
Comments:

Name: Arlene Valliquette
Signature: *Arlene Valliquette*
Title: Mgr - Regulatory Affairs
Date: 9/29/00

NEW OPERATOR

Company: Journey Operating, L.L.C.
Address: 1201 Louisiana, Suite 1040
city Houston state TX zip 77002
Phone: (713) 655-0595
Comments:

Name: Brian A. Baer
Signature: *Brian A. Baer*
Title: President
Date: 10/6/00

(This space for State use only)

Transfer approved by: *[Signature]*

Approval Date: 11/3/01

Title: *Trish Services Manager*

Comments:

CHANGE OF OPERATOR
from Merit Energy Company to Journey Operating, L.L.C.
San Juan County, Utah

Attachment to Utah Form 19

Well Type	Lease Serial No.	Field Name	Well Name/Number	API Number	Location of Well
Oil Well	UTU-40361	Bannock	Bannock Federal #21-33	43-037-31425	NE NW (685' FNL & 1520' FWL) Sec. 33-T38S-R24E
Injection Well	I-149-IND-9123	Ismay	Ismay Flodine Park R-124	43-037-16169	NE NE (660' FNL & 660' FEL) Sec. 24-T40S-R25E
Oil Well	14-20-603-2055-A	Ismay	Ismay Flodine Park S-216	43-037-15546	SW NW (1820' FNL & 500' FWL) Sec. 16-T40S-R26E
Injection Well	14-20-603-2055-A	Ismay	Ismay Flodine Park T-316	43-037-16462	NE SW (1980' FSL & 1980' FWL) Sec. 16-T40S-R26E
Oil Well	14-20-603-2055-A	Ismay	Ismay Flodine Park S-416	43-037-15544	SW SW (1820' FNL & 500' FWL) Sec. 16-T40S-R26E
Oil Well	14-20-603-2055-A	Ismay	Ismay Flodine Park U-416	43-037-15545	SW SE (660' FSL & 1980' FEL) Sec. 16-T40S-R26E
Injection Well	I-149-IND-9124	Ismay	Ismay Flodine Park T-117	43-037-16456	NE NW (775' FNL & 1995' FWL) Sec. 17-T40S-R26E
Oil Well	I-149-IND-9124	Ismay	Ismay Flodine Park S-217	43-037-16170	SW NW (1980' FNL & 660' FWL) Sec. 17-T40S-R26E
Injection Well	I-149-IND-9124	Ismay	Ismay Flodine Park V-117	43-037-16188	NE NE (660' FNL & 660' FEL) Sec. 17-T40S-R26E
Oil Well	I-149-IND-9124	Ismay	Ismay Flodine Park U-217	43-037-16180	SW NE (1980' FNL & 1820' FEL) Sec. 17-T40S-R26E
Injection Well	I-149-IND-9124	Ismay	Ismay Flodine Park T-317	43-037-16463	NE SW (1980' FSL & 1980' FWL) Sec. 17-T40S-R26E
Oil Well	I-149-IND-9124	Ismay	Ismay Flodine Park U-417	43-037-16185	SW SE (500' FSL & 1820' FEL) Sec. 17-T40S-R26E
Injection Well	I-149-IND-9123	Ismay	Ismay Flodine Park T-118	43-037-16457	NE NW (660' FNL & 1980' FWL) Sec. 18-T40S-R26E
Oil Well	I-149-IND-9123	Ismay	Ismay Flodine Park S-218	43-037-16171	SW NW (1820' FNL & 660' FWL) Sec. 18-T40S-R26E
Oil Well	I-149-IND-9123	Ismay	Ismay Flodine Park T-318	43-037-16464	NE SE (1980' FSL & 1980' FWL) Sec. 18-T40S-R26E
Oil Well	I-149-IND-9123	Ismay	Ismay Flodine Park V-318	43-037-16467	NE SE (1980' FSL & 660' FEL) Sec. 18-T40S-R26E
Oil Well	I-149-IND-9123	Ismay	Ismay Flodine Park U-418	43-037-16186	SW SE (660' FSL & 1980' FEL) Sec. 18-T40S-R26E
Injection Well	I-149-IND-9123	Ismay	Ismay Flodine Park T-119	43-037-16458	NE NW (660' FNL & 1980' FWL) Sec. 19-T40S-R26E
Water Source Well	I-149-IND-9123	Ismay	Ismay Flodine Park V-219	43-037-16519	SE NE (1980' FNL & 560' FEL) Sec. 19-T40S-R26E
Oil Well	I-149-IND-9124	Ismay	Ismay Flodine Park V-120	43-037-16190	NE NE (660' FNL & 660' FEL) Sec. 20-T40S-R26E
Water Source Well	I-149-IND-9124	Ismay	Ismay Flodine Park V-220	43-037-20055	SE NE (1950' FNL & 1120' FEL) Sec. 20-T40S-R26E
Oil Well	I-149-IND-9124	Ismay	Ismay Flodine Park S-121	43-037-31629	NW NW (500' FNL & 660' FWL) Sec. 21-T40S-R26E
Injection Well	I-149-IND-9124	Ismay	Ismay Flodine Park T-121	43-037-16460	NE NW (610' FNL & 2050' FWL) Sec. 21-T40S-R26E
Water Source Well	I-149-IND-9124	Ismay	Ismay Flodine Park U-121	43-037-20056	NW NE (540' FNL & 1980' FEL) Sec. 21-T40S-R26E
Injection Well	I-149-IND-9124	Ismay	Ismay Flodine Park V-121	43-037-16191	NE NE (660' FNL & 660' FEL) Sec. 21-T40S-R26E
Injection Well	I-149-IND-9124	Ismay	Ismay Flodine Park U-421	43-037-11267	SW SE (660' FSL & 1980' FEL) Sec. 21-T40S-R26E
Injection Well	I-149-IND-9124	Ismay	Ismay Flodine Park V-321	43-037-16194	NE SE (1980' FSL & 670' FEL) Sec. 21-T40S-R26E

CHANGE OF OPERATOR
from Merit Energy Company to Journey Operating, L.L.C.
San Juan County, Utah

Attachment to Utah Form 19

Well Type	Lease Serial No.	Field Name	Well Name/Number	API Number	Location of Well
Oil Well	I-149-IND-9124	Ismay	Ismay Flodine Park S-222	43-037-16173	SW NW (2030' FNL & 820' FWL) Sec. 22-T40S-R26E
Injection Well	I-149-IND-9124	Ismay	Ismay Flodine Park T-322	43-037-16179	NE SW (1820' FSL & 1935' FWL) Sec. 22-T40S-26E
Oil Well	I-149-IND-9124	Ismay	Ismay Flodine Park U-422	43-037-16187	SW SE (820' FSL & 2140' FEL) Sec. 22-T40S-R26E
Oil Well	NOG-9904-1324	Ismay	Ismay Flodine Park S-227	43-037-16231	SW NW (2140' FNL & 820' FWL) Sec. 27-T40S-R26E
Oil Well	NOG-9904-1324	Ismay	Ismay Flodine Park U-127	43-037-31648	NE NE (745' FNL & 595' FEL) Sec. 27-T40S-R26E
Oil Well	NOG-9904-1324	Ismay	Ismay Flodine Park U-227	43-037-16234	SW NE (2120' FNL & 1950' FEL) Sec. 27-T40S-R26E
Oil Well	14-20-603-2058-A	Ismay	Ismay Flodine Park U-234	43-037-16184	SW NE (1980' FNL & 2080' FEL) Sec. 34-T40S-R26E
Water Source Well	UTU-20894	Kachina	Wash Unit #2	43-037-31324	SE SE (470' FSL & 850' FEL) Sec. 13-T38S-R23E
Oil Well	UTU-20895	Kachina	Havasus Federal #41-24	43-037-31279	NE NE (1050' FNL & 500' FEL) Sec. 24-T38S-R23E
Injection Well	UTU-20895	Kachina	Havasus Federal #42-24	43-037-31298	SE NE (1970' FNL & 461' FEL) Sec. 24-T38S-R23E
Injection Well	UTU-56186	Kachina	Arabian Federal #2	43-037-31282	NW SW (2180' FSL & 950' FWL) Sec. 19-T38S-R24E
Oil Well	UTU-56186	Kachina	Arabian Federal #3	43-037-31287	NE SW (1470' FSL & 1750' FWL) Sec. 19-T38S-R24E
Injection Well	UTU-56186	Kachina	Havasus Federal #11-19	43-037-31458	NW NW (940' FNL & 590' FWL) Sec. 19-T38S-R24E
Oil Well	UTU-56186	Kachina	Havasus Federal #12-19	43-037-31457	SW NW (1840' FNL & 410' FWL) Sec. 19-T38S-R24E
Oil Well	UTU-56186	Kachina	Havasus Federal #12-19A	43-037-31459	SW NW (2520' FNL & 200' FWL) Sec. 19-T38S-R24E
Oil Well	UTU-56186	Kachina	Havasus Federal #22-19	43-037-31278	SW NW (1850' FNL & 1255' FWL) Sec. 19-T38S-R24E
Injection Well	UTU-52333	Kiva	Navajo Federal #12-4	43-037-31395	SW NW (2260' FNL & 440' FWL) Sec. 4-T39S-R25E
Injection Well	UTU-52333	Kiva	Navajo Federal #14-4	43-037-31321	SW SW (1150' FSL & 1110' FWL) Sec. 4-T39S-R25E
Injection Well	UTU-52333	Kiva	Navajo Federal #23-4	43-037-31259	NE SW (1500' FSL & 2500' FWL) Sec. 4-T39S-R25E
Oil Well	UTU-52333	Kiva	Kiva Federal #24-4	43-037-31745	SE SW (1057' FSL & 1997' FWL) Sec. 4-T39S-R25E
Injection Well	UTU-52333	Kiva	Navajo Federal #4-1	43-037-31112	SE SW (370' FSL & 1940' FWL) Sec. 4-T39S-R25E
Oil Well	UTU-52333	Kiva	Navajo Federal #4-2	43-037-31161	SW SE (300' FSL & 2225' FEL) Sec. 4-T39S-R25E
Oil Well	UTU-52333	Kiva	Navajo Federal #4-4	43-037-31179	NW SW (1980' FSL & 660' FWL) Sec. 4-T39S-R25E
Oil Well	UTU-57895	Kiva	Navajo Federal #42-5	43-037-31261	SE NE (2130' FNL & 320' FEL) Sec. 5-T39S-R25E
Injection Well	UTU-58728	Kiva	Navajo Federal #43-5	43-037-31317	NE SE (1954' FSL & 627' FEL) Sec. 5-T39S-R25E
Oil Well	UTU-52333	Kiva	Navajo Federal #9-1	43-037-31001	NW NE (770' FNL & 2010' FEL) Sec. 9-T39S-R25E

CHANGE OF OPERATOR
from Merit Energy Company to Journey Operating, L.L.C.
San Juan County, Utah

Attachment to Utah Form 19

Well Type	Lease Serial No.	Field Name	Well Name/Number	API Number	Location of Well
Injection Well	UTU-52333	Kiva	Navajo Federal #21-9	43-037-31267	NE NW (330' FNL & 2510' FWL) Sec. 9-T39S-R25E
Water Source Well	UTU-52333	Kiva	Navajo Federal #42-9	43-037-31263	SE NE (1850' FNL & 1140' FEL) Sec. 9-T39S-R25E

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
Budget Bureau No.: 1004-0135
Expires: November 30, 2000

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or reentry to an
abandoned well. Use Form 3160-3 (APD) for such proposals

SUBMIT IN TRIPLICATE - Other Instructions on reverse side

1. Type of well

☐ Oil ☐ Gas ☒ Other
Well Well Water Source Well

2. Name of Operator

Journey Operating, L.L.C.

3a. Address and Telephone No.

1201 Louisiana, Suite 1040, Houston, Tx 77002

3b. Phone No. (include area code)

713-655-0595

4. Location of Well (Footage, Sec, T,R, or Survey Description)

1970' FNL & 461' FEL (SE NE)

Sec 24, T 38S, R 23E

5. Lease Designation and Serial No.

UTU-20895

7. If Unit or CA, Agreement Designation

8. Well Name and No.

Havasu Federal #42-24

9. API Number

43-037-31298

10. Field and Pool or Exploratory Area

Kachina; Ismay

11. County or Parish, State

San Juan County, UT

12 CHECK APPROPRIATE BOX(s) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION

- ☒ Notice of Intent
☐ Subsequent Report
☐ Final Abandonment Notice

TYPE OF ACTION

- | | | | |
|---|---|--|---|
| <input type="checkbox"/> Acidize | <input type="checkbox"/> Deepen | <input type="checkbox"/> Production (Start/Resume) | <input type="checkbox"/> Water Shut-Off |
| <input type="checkbox"/> Alter Casing | <input type="checkbox"/> Fracture Treat | <input type="checkbox"/> Reclamation | <input type="checkbox"/> Well Integrity |
| <input type="checkbox"/> Casing Repair | <input type="checkbox"/> New construction | <input type="checkbox"/> Recomplete | <input checked="" type="checkbox"/> Other |
| <input type="checkbox"/> Change Plans | <input type="checkbox"/> Plug and Abandon | <input type="checkbox"/> Temporarily Abandon | <u>Change of Operator</u> |
| <input type="checkbox"/> Convert to Injection | <input type="checkbox"/> Plug Back | <input type="checkbox"/> Water Disposal | |

13. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated starting date of starting any proposed work and approximate duration thereof.

If the proposal is to deepen directionally or recompleat horizontally, give subsurface location and measured and true vertical depths of all pertinent markers and zone. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operations result in a multiple completion or recompleat in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notice shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

Journey Operating, L.L.C. hereby accepts the operatorship of this well effective October 1, 2000. Journey Operating, L.L.C. will be responsible under the terms and conditions of the lease(s) for the operations conducted on the leased lands or portions thereof. Journey Operating, L.L.C. bond coverage is provided under Bond No. RLB0002487. BLM Bond # WY 3354- Nationwide

14 I hereby certify that the foregoing is true and correct

Signed: [Signature] Title: Sr. Regulatory Analyst

Date: 1/17/01

(This space for Federal or State office use)

Approved by: [Signature] Title: Assistant Field Manager,

Date: 1/22/01

Conditions of approval, if any:

CONDITIONS OF APPROVAL ATTACHED

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make any department or agency of the United State any false, fictious or fraudulent statements or representations as to any matter within its jurisdiction.

*See Instructions on Reverse Side

cc: DDM 162101

RECEIVED

JAN 25 2001

DIVISION OF
OIL, GAS AND MINING

Journey Operating, LLC
Well No. Havasu Federal 42-24
SENE Sec. 24, T. 38 S., R. 23 E.
Lease UTU20895
San Juan County, Utah

CONDITIONS OF APPROVAL

Approval of this application does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Be advised that Journey Operating, LLC is considered to be the operator of the above well and is responsible under the terms and conditions of the lease for the operations conducted on the leased lands.

Bond coverage for this well is provided by WY3354 (Principal - Journey Operating, LLC) via surety consent as provided for in 43 CFR 3104.2.

This office will hold the aforementioned operator and bond liable until the provisions of 43 CFR 3106.7-2 continuing responsibility are met.

RECEIVED

JAN 25 2001

DIVISION OF
OIL, GAS AND MINING

OPERATOR CHANGE WORKSHEET

ROUTING

1. GLH		4-KAS ✓
2. CDW		5- 870 ✓
3. JLT		6-FILE

Enter date after each listed item is completed

X Change of Operator (Well Sold)

Designation of Agent

Operator Name Change (Only)

Merger

The operator of the well(s) listed below has changed, effective: **10-1-2000**

FROM: (Old Operator):
MERIT ENERGY COMPANY
Address: 12222 MERIT DR. STE 1500
DALLAS, TX 75251
Phone: 1-(972)-701-8377
Account No. N4900

CA No.

TO: (New Operator):
JOURNEY OPERATING LLC
Address: 1201 LOUISIANA STE 1040
HOUSTON, TX 77002
Phone: 1-(713)-655-0595
Account No. N1435

Unit: KACHINA

WELL(S)

NAME	API NO.	ENTITY NO.	SEC. TWN RNG	LEASE TYPE	WELL TYPE	WELL STATUS
HAVASU FEDERAL 42-24	43-037-31298	10654	24-38S-23E	FEDERAL	WI	A

OPERATOR CHANGES DOCUMENTATION

- (R649-8-10) Sundry or legal documentation was received from the **FORMER** operator on: 10/20/2000
- (R649-8-10) Sundry or legal documentation was received from the **NEW** operator on: 01/25/2001
- The new company has been checked through the **Department of Commerce, Division of Corporations Database** on: 02/06/2001
- Is the new operator registered in the State of Utah: YES Business Number: 4822566-0161
- If **NO**, the operator was contacted on: N/A
- Federal and Indian Lease Wells:** The BLM and or the BIA has approved the (merger, name change, or operator change for all wells listed on Federal or Indian leases on: 01/22/2001

7. **Federal and Indian Units:** The BLM or BIA has approved the successor of unit operator for wells listed on: N/A
8. **Federal and Indian Communization Agreements ("CA"):** The BLM or the BIA has approved the operator change for all wells listed involved in a CA on: N/A
9. **Underground Injection Control ("UIC") Prog:** The Division has approved UIC Form 5, **Transfer of Authority to Inject**, for the enhanced/secondary recovery unit/project for the water disposal well(s) listed on: 01/03/2001

DATA ENTRY:

1. Changes entered in the **Oil and Gas Database** on: 02/06/2001
2. Changes have been entered on the **Monthly Operator Change Spread Sheet** on: 02/06/2001
3. Bond information entered in RBDMS on: N/A
4. Fee wells attached to bond in RBDMS on: N/A

STATE BOND VERIFICATION:

1. State well(s) covered by Bond No.: N/A

FEE WELLS - BOND VERIFICATION/LEASE INTEREST OWNER NOTIFICATION:

1. (R649-3-1) The **NEW** operator of any fee well(s) listed has furnished a bond No: _____
2. The **FORMER** operator has requested a release of liability from their bond on: N/A
The Division sent response by letter on: N/A
3. (R649-2-10) The **FORMER** operator of the Fee wells has been contacted and informed by a letter from the Division of their responsibility to notify all interest owners of this change on: 01/31/2001

FILMING:

1. All attachments to this form have been **MICROFILMED** on: 2-21-01

FILING:

1. **ORIGINALS/COPIES** of all attachments pertaining to each individual well have been filled in each well file on: _____

COMMENTS:

Division of Oil, Gas and Mining
OPERATOR CHANGE WORKSHEET

ROUTING

1. DJJ

2. CDW

X Change of Operator (Well Sold)

Operator Name Change/Merger

The operator of the well(s) listed below has changed, effective:

6/9/2006

FROM: (Old Operator):

N1435-Journey Operating, LLC
 201 Louisiana, Suite 1040
 Houston, TX 77002

Phone: 1 (713) 655-0595

TO: (New Operator):

N0265-Citation Oil & Gas Corp
 8223 Willow Place South
 Houston, TX 77070

Phone: 1 (281) 517-7800

CA No.

Unit:

KACHINA

WELL NAME	SEC	TWN	RNG	API NO	ENTITY NO	LEASE TYPE	WELL TYPE	WELL STATUS
HAVASU-FEDERAL 22-19	19	380S	240E	4303731278	10654	Federal	OW	P
HAVASU-FEDERAL 41-24	24	380S	230E	4303731279	10654	Federal	OW	P
ARABIAN FED 2	19	380S	240E	4303731282	10654	Federal	WI	A
ARABIAN FEDERAL 3	19	380S	240E	4303731287	10654	Federal	OW	P
HAVASU FED 42-24	24	380S	230E	4303731298	10654	Federal	WI	A
WASH UNIT 2	13	380S	230E	4303731324	10654	Federal	WS	A
HAVASU FEDERAL 12-19	19	380S	240E	4303731457	10654	Federal	OW	S
HAVASU FED 11-19	19	380S	240E	4303731458	10654	Federal	WI	A
HAVASU FEDERAL 12-19A	19	380S	240E	4303731459	10654	Federal	OW	P

OPERATOR CHANGES DOCUMENTATION

Enter date after each listed item is completed

- (R649-8-10) Sundry or legal documentation was received from the **FORMER** operator on: 6/23/2006
- (R649-8-10) Sundry or legal documentation was received from the **NEW** operator on: 6/23/2006
- The new company was checked on the **Department of Commerce, Division of Corporations Database** on: _____
- Is the new operator registered in the State of Utah: YES Business Number: 793304-0143
- If **NO**, the operator was contacted on: _____
- (R649-9-2) Waste Management Plan has been received on: IN PLACE
- Inspections of LA PA state/fee well sites complete on: n/a
- Reports current for Production/Disposition & Sundries on: ok
- Federal and Indian Lease Wells:** The BLM and or the BIA has approved the merger, name change, or operator change for all wells listed on Federal or Indian leases on: BLM 7/6/2006 BIA
- Federal and Indian Units:**
The BLM or BIA has approved the successor of unit operator for wells listed on: 7/6/2006
- Federal and Indian Communization Agreements ("CA"):**
The BLM or BIA has approved the operator for all wells listed within a CA on: n/a
- Underground Injection Control ("UIC")** The Division has approved UIC Form 5, **Transfer of Authority to Inject**, for the enhanced/secondary recovery unit/project for the water disposal well(s) listed on: 6/30/2006

DATA ENTRY:

- Changes entered in the **Oil and Gas Database** on: 7/31/2006
- Changes have been entered on the **Monthly Operator Change Spread Sheet** on: 7/31/2006
- Bond information entered in RBDMS on: n/a
- Fee/State wells attached to bond in RBDMS on: n/a
- Injection Projects to new operator in RBDMS on: 7/31/2006

BOND VERIFICATION:

- Federal well(s) covered by Bond Number: 104061650
- Indian well(s) covered by Bond Number: 104061656

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

FORM 9

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

1. TYPE OF WELL OIL WELL ☐ GAS WELL ☐ OTHER _____

2. NAME OF OPERATOR:
Journey Operating, L.L.C.

N 1435

3. ADDRESS OF OPERATOR:
1201 Louisiana, Suite 1040 CITY Houston STATE TX ZIP 77002

PHONE NUMBER:
(713) 655-0595

4. LOCATION OF WELL

FOOTAGES AT SURFACE: See Attached List

COUNTY: San Juan

QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:

STATE: UTAH

5. LEASE DESIGNATION AND SERIAL NUMBER:
See Attached List

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7. UNIT or CA AGREEMENT NAME:
See Attached List

8. WELL NAME and NUMBER:
See Attached List

9. API NUMBER:
See Attach

10. FIELD AND POOL, OR WILDCAT:
See Attached List

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> NOTICE OF INTENT (Submit in Duplicate) Approximate date work will start: _____	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> REPERFORATE CURRENT FORMATION
	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> SIDETRACK TO REPAIR WELL
	<input type="checkbox"/> CASING REPAIR	<input type="checkbox"/> NEW CONSTRUCTION	<input type="checkbox"/> TEMPORARILY ABANDON
	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input checked="" type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> TUBING REPAIR
	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> VENT OR FLARE
<input type="checkbox"/> SUBSEQUENT REPORT (Submit Original Form Only) Date of work completion: _____	<input type="checkbox"/> CHANGE WELL NAME	<input type="checkbox"/> PLUG BACK	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> PRODUCTION (START/RESUME)	<input type="checkbox"/> WATER SHUT-OFF
	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> OTHER: _____
	<input type="checkbox"/> CONVERT WELL TYPE	<input type="checkbox"/> RECOMPLETE - DIFFERENT FORMATION	

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS: Clearly show all pertinent details including dates, depths, volumes, etc.

Journey Operating, L.L.C. advises, effective June 9, 2006, Citation Oil & Gas Corp. will become the operator of the wells on the attached list.

Citation Oil & Gas Corp. (N0265)
8223 Willow Place South
Houston, TX 77070
(281) 517-7800
Bond No.: 104325628 - \$120,000

BLM BOND = 104061650
BIA BOND = 104061656

By: Robert T. Kennedy
Robert T. Kennedy
Sr. Vice President Land

NAME (PLEASE PRINT) Brian A. Baer

TITLE President

SIGNATURE

Brian A. Baer

DATE 6/9/2006

(This space for State use only)

APPROVED 7/13/2006

Earlene Russell
Division of Oil, Gas and Mining
Earlene Russell, Engineering Technician

(5/2000)

RECEIVED
JUN 23 2006

DIV. OF OIL, GAS & MINING

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING


UIC FORM 5

TRANSFER OF AUTHORITY TO INJECT

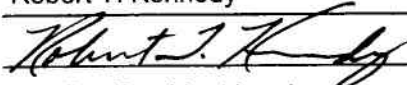
Well Name and Number Havasu Federal #42-24	API Number 4303731298
Location of Well Footage : 1970' FNL & 461' FEL County : San Juan QQ, Section, Township, Range: SENE 24 38S 23E State : UTAH	Field or Unit Name Kachina Lease Designation and Number UTU-20895

EFFECTIVE DATE OF TRANSFER: 6/9/2006


CURRENT OPERATOR

Company: Journey Operating, L.L.C.	Name: Brian A. Baer
Address: 1201 Louisiana, Suite 1040	Signature: 
city Houston state TX zip 77002	Title: President
Phone: (713) 655-0595	Date: 6/9/2006
Comments:	

NEW OPERATOR

Company: Citation Oil & Gas Corp.	Name: Robert T. Kennedy
Address: 8223 Willow Place South	Signature: 
city Houston state TX zip 77070	Title: Sr. Vice President Land
Phone: (281) 517-7800	Date: 6/9/2006
Comments:	

(This space for State use only)

Transfer approved by: 
Title: Oil Geologist

Approval Date: 6/30/06

Comments:

RECEIVED
JUN 23 2006

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENTFORM APPROVED
OMB No. 1004-0137
Expires: March 31, 2007**SUNDRY NOTICES AND REPORTS ON WELLS**

Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.

SUBMIT IN TRIPLICATE- Other instructions on reverse side.1. Type of Well
☒ Oil Well ☐ Gas Well ☐ Other2. Name of Operator
Citation Oil & Gas Corp.3a. Address
8223 Willow Place South, Houston, TX 770703b. Phone No. (include area code)
281-517-7800

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

1970' FNL & 461' FEL (SE NE)
Section 24-T38S-R23E

5. Lease Serial No.

UTU-20895

6. If Indian, Allottee or Tribe Name

7. If Unit or CA/Agreement, Name and/or No.

8. Well Name and No.

Havasu Federal #42-24

9. API Well No.

43-037-31298

10. Field and Pool, or Exploratory Area

Kachina; Ismay

11. County or Parish, State

San Juan Co., UT

12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input checked="" type="checkbox"/> Other Change of Operator
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleat in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

Effective June 9, 2006, Citation Oil & Gas Corp. will take over as operator of the above captioned lease(s) from Journey Operating, L.L.C.

Citation Oil & Gas Corp. hereby accepts the operatorship of the above captioned lease(s). Citation Oil & Gas Corp. will be responsible under the terms and conditions of the lease(s) for the operations conducted on the leased lands or portion thereof. Citation Oil & Gas Corp. bond coverage is provided under Bond No. 104061650 MTB000053.

14. I hereby certify that the foregoing is true and correct
Name (Printed/Typed)

Robert T. Kennedy

Title Sr. Vice President Land

Signature

Date

06/09/2006

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by

ACCEPTED

Division of Resources

Date

7/6/06

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Moab Field Office

Office

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

RECEIVED
JUL 10 2006

(Instructions on page 2)

cc: 4006m 7/6/06

CONDITIONS OF APPROVAL ATTACHED

DIV. OF OIL, GAS & MINING

Citation Oil and Gas Corporation
Well Nos. 41-24 and 42-24
Section 24, T38S, R23E
Lease UTU56186
Grand County, Utah

CONDITIONS OF ACCEPTANCE

Acceptance of these applications does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Be advised that Citation Oil and Gas Corporation is considered to be the operator of the above wells effective June 9, 2006, and is responsible under the terms and conditions of the lease for the operations conducted on the leased lands.

Bond coverage for these wells is provided by MTB000053 (Principal – Citation Oil and Gas Corporation) via surety consent as provided for in 43 CFR 3104.2.

This office will hold the aforementioned operator and bond liable until the provisions of 43CFR 3106.7-2 continuing responsibility are met.



RICHARDSON OPERATING COMPANY

4725 S. Monaco Street, Suite 200
Denver, Colorado 80237
(303) 830-8000 Fax (303) 830-8009

RECEIVED

AUG 02 2013

DIV. OF OIL, GAS & MINING

July 29, 2013

Attn: Zeke Clements
Utah Division of Oil, Gas and Mining
1594 West North Temple, Suite 1210
Box 145801
Salt Lake City, Utah 84114-5801

Re: Sundry Notices and Reports on Wells - Change of Operator and Transfers of Authority to Inject

Dear Zeke:

Enclosed for approval by the Utah Division of Oil, Gas and Mining, please find two originally executed Sundry Notices and Reports on Wells on Form 9, for the following 18 leases and wells (API # included):

<u>Lease #</u>	<u>Well Name</u>	<u>API Well No.</u>
UTU-20894	Wash Unit 2	43-037-31324 ✓
UTU-20895	Havasu-Federal 41-24	43-037-31279 ✓
UTU-20895	Havasu-Federal 42-24	43-037-31298 ✓
UTU-40361	Bannock -Fed 21-33	43-037-31425 ✓
UTU-52333	24-4 Kiva Federal	43-037-31745 ✓
UTU-52333	Navajo Federal 12-4	43-037-31395 ✓
UTU-52333	Navajo Federal 14-4	43-037-31321 ✓
UTU-52333	Navajo Federal 21-9	43-037-31267 ✓
UTU-52333	Navajo Federal 4-1	43-037-31112 ✓
UTU-52333	Navajo Federal 4-2	43-037-31161 ✓
UTU-52333	Navajo Federal 42-9	43-037-31263 ✓
UTU-52333	Navajo Federal 4-4	43-037-31179 ✓
UTU-52333	Navajo Federal 9-1	43-037-31001 ✓
UTU-56185	Arabian Federal 3	43-037-31287 ✓
UTU-56186	Havasu-Federal 11-19	43-037-31458 ✓
UTU-56186	Havasu-Federal 22-19	43-037-31278 ✓
UTU-58728	Navajo Federal 42-5	43-037-31261 ✓
UTU-58728	Navajo Federal 43-5	43-037-31317 ✓

APPROVED

AUG 19 2013

DIV. OIL GAS & MINING
BY: Raehee Medina

Also enclosed for the approval by the Utah Division of Oil, Gas and Mining, please find one originally executed Transfer of Authority to Inject on Form UIC Form 5 for the following seven wells:

<u>Lease #</u>	<u>Well Name</u>	<u>API Well No.</u>
UTU-20895	Havasus-Federal 42-24	43-037-31298 ✓
UTU-52333	Navajo Federal 12-4	43-037-31395 ✓
UTU-52333	Navajo Federal 14-4	43-037-31321 ✓
UTU-52333	Navajo Federal 21-9	43-037-31267 ✓
UTU-52333	Navajo Federal 4-1	43-037-31112 ✓
UTU-56186	Havasus-Federal 11-19	43-037-31458 ✓
UTU-58728	Navajo Federal 43-5	43-037-31317 ✓

Please return the approved documents for each well to:

Richardson Operating Company
4725 S. Monaco Street, Suite 200,
Denver, Colorado 80237.

If you have any questions, please do not hesitate to contact me at the number above or via email at land@richardsonoil.com.

Sincerely,



Ann Barthrop
Senior Land Analyst

Enclosures

RECEIVED
AUG 02 2013
Div. of Oil, Gas & Mining

Division of Oil, Gas and Mining
OPERATOR CHANGE WORKSHEET (for state use only)

ROUTING

CDW

X - Change of Operator (Well Sold)

Operator Name Change/Merger

The operator of the well(s) listed below has changed, effective:

4/1/2013

FROM: (Old Operator):

N0265-Citation Oil & Gas Corp

P O BOX 690688

Houston, TX. 77269

Phone: 1 (281) 891-1000

TO: (New Operator):

N2400-Richardson Operating Co.

4725 S Monaco Street, Suite 200

Denver, CO. 80237

Phone: 1 (303)830-8000

CA No.

Unit:

Kachina

WELL NAME	SEC	TWN	RNG	API NO	ENTITY NO	LEASE TYPE	WELL TYPE	WELL STATUS
See Attached List								

OPERATOR CHANGES DOCUMENTATION

Enter date after each listed item is completed

- (R649-8-10) Sundry or legal documentation was received from the **FORMER** operator on: 8/2/2013
- (R649-8-10) Sundry or legal documentation was received from the **NEW** operator on: 8/2/2013
- The new company was checked on the **Department of Commerce, Division of Corporations Database** on: 8/26/2013
- a. Is the new operator registered in the State of Utah: Business Number: 8776630-0143
- a. (R649-9-2) Waste Management Plan has been received on: N/A
- b. Inspections of LA PA state/fee well sites complete on: N/A
- c. Reports current for Production/Disposition & Sundries on: 8/19/2013
- Federal and Indian Lease Wells:** The BLM and or the BIA has approved the merger, name change, or operator change for all wells listed on Federal or Indian leases on: BLM Not Yet BIA N/A
- Federal and Indian Units:**
The BLM or BIA has approved the successor of unit operator for wells listed on: Not Yet
- Federal and Indian Communization Agreements ("CA"):**
The BLM or BIA has approved the operator for all wells listed within a CA on: Not Yet
- Underground Injection Control ("UIC")** Division has approved UIC Form 5 Transfer of Authority to **Inject**, for the enhanced/secondary recovery unit/project for the water disposal well(s) listed on: 8/7/2013

DATA ENTRY:

- Changes entered in the **Oil and Gas Database** on: 8/26/2013
- Changes have been entered on the **Monthly Operator Change Spread Sheet** on: 8/26/2013
- Bond information entered in RBDMS on: 8/26/2013
- Fee/State wells attached to bond in RBDMS on: N/A
- Injection Projects to new operator in RBDMS on: 8/26/2013
- Receipt of Acceptance of Drilling Procedures for APD/New on: N/A

BOND VERIFICATION:

- Federal well(s) covered by Bond Number: RLB0002500
- Indian well(s) covered by Bond Number: N/A
- a. (R649-3-1) The **NEW** operator of any state/fee well(s) listed covered by Bond Number N/A
- b. The **FORMER** operator has requested a release of liability from their bond on: N/A

LEASE INTEREST OWNER NOTIFICATION:

- (R649-2-10) The **NEW** operator of the fee wells has been contacted and informed by a letter from the Division of their responsibility to notify all interest owners of this change on: N/A

COMMENTS:

Citation Oil & Gas Corp (N0265) to Richardson Operating Co. (N2400)
Effective 1-April-2013

Well Name	Sec.	Township	Range	API No.	Utah Entity No.	Mineral Lease Type	Well Type	Well Status	Unit Name
HAVASU-FEDERAL 22-19	19	380S	240E	4303731278	10654	Federal	Oil Well	Producing	KACHINA
HAVASU-FEDERAL 41-24	24	380S	230E	4303731279	10654	Federal	Oil Well	Producing	KACHINA
ARABIAN FEDERAL 3	19	380S	240E	4303731287	10654	Federal	Oil Well	Producing	KACHINA
HAVASU FED 42-24	24	380S	230E	4303731298	10654	Federal	Water Injection	Active	KACHINA
WASH UNIT 2	13	380S	230E	4303731324	9975	Federal	Water Source	Active	KACHINA
HAVASU FED 11-19	19	380S	240E	4303731458	10654	Federal	Water Injection	Active	KACHINA

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

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AUG 02 2013

FORM 9

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

1. TYPE OF WELL OIL WELL ☐ GAS WELL ☐ OTHER Change of Operator (SWD)

2. NAME OF OPERATOR:
Richardson Operating Company

3. ADDRESS OF OPERATOR:
4725 S Monaco St. Suite 200 CITY Denver STATE CO ZIP 80237

PHONE NUMBER:
(303) 830-8000

5. LEASE DESIGNATION AND SERIAL NUMBER:
Federal UTU-20895

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
N/A

7. UNIT or CA AGREEMENT NAME:
NA

8. WELL NAME and NUMBER:
HAVASU FED 42-24

9. API NUMBER:
037-31298

10. FIELD AND POOL, OR WILDCAT:
KACHINA

4. LOCATION OF WELL

FOOTAGES AT SURFACE: 1970 N 461 E

COUNTY: SAN JUAN

QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: SENE 24 38S 23E

STATE: UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> NOTICE OF INTENT (Submit in Duplicate) Approximate date work will start: _____	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> REPERFORATE CURRENT FORMATION
	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> SIDETRACK TO REPAIR WELL
	<input type="checkbox"/> CASING REPAIR	<input type="checkbox"/> NEW CONSTRUCTION	<input type="checkbox"/> TEMPORARILY ABANDON
	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input checked="" type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> TUBING REPAIR
	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> VENT OR FLARE
<input type="checkbox"/> SUBSEQUENT REPORT (Submit Original Form Only) Date of work completion: _____	<input type="checkbox"/> CHANGE WELL NAME	<input type="checkbox"/> PLUG BACK	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> PRODUCTION (START/RESUME)	<input type="checkbox"/> WATER SHUT-OFF
	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> OTHER: _____
	<input type="checkbox"/> CONVERT WELL TYPE	<input type="checkbox"/> RECOMPLETE - DIFFERENT FORMATION	

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

Citation Oil & Gas Corp. has sold the captioned well to Richardson Operating Company and requests that they be named as Operator of Record effective 4/1/2013

Please release this well from coverage under Citation Oil & Gas Corp.'s Utah Statewide Bond # 104325628.

On behalf of Citation Oil & Gas Corp. I hereby certify that the foregoing is true and correct:

Sharon Ward Permitting Manager: Sharon Ward Date: 4/1/2013

By execution of this document, Richardson Operating Company requests the State of Utah to approve them as Operator of Record for the above captioned well and accepts responsibility for this well under its Statewide Oil and Gas Lease Bond in favor of the United States Department of the Interior, Bureau of Land Management Bond # RLB0002500.

On behalf of Richardson Operating Company, I hereby certify that the foregoing is true and correct:

NAME (PLEASE PRINT) David B. Richardson, Jr.

TITLE President

SIGNATURE

David B. Richardson, Jr.

DATE

7-29-2013

(This space for State use only)

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

RECEIVED

AUG 02 2013

UIC FORM 5

Div. of Oil, Gas & Mining

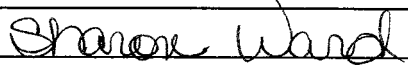
TRANSFER OF AUTHORITY TO INJECT

Well Name and Number HAVASU FED 42-24		API Number 43-03731298
Location of Well Footage : 1970 N 461 E County : SAN JUAN		Field or Unit Name KACHINA
QQ, Section, Township, Range: NE 24 38S 23E State : UTAH		Lease Designation and Number Federal UTU-20895

EFFECTIVE DATE OF TRANSFER: 4/1/2013

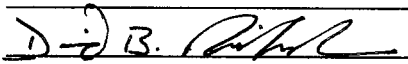
CURRENT OPERATOR

Company: Citation Oil & Gas Corp.
Address: 14077 Cutten Rd
city Houston state TX zip 77069-2212
Phone: (281) 891-1000
Comments:

Name: Sharon Ward
Signature: 
Title: Permitting Manager
Date: 4/1/2013

NEW OPERATOR

Company: Richardson Operating Company
Address: 4725 S Monaco St. Suite 200
city Denver state CO zip 80237
Phone: (303) 830-8000
Comments:

Name: David B. Richardson, Jr.
Signature: 
Title: President
Date: 7-29-2013

(This space for State use only)

Transfer approved by: 
Title: UIC Geologist

Approval Date: 8/7/13

Comments:



RICHARDSON OPERATING COMPANY

4725 S. Monaco Street, Suite 200
Denver, Colorado 80237
(303) 830-8000 Fax (303) 830-8009

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AUG 02 2013

DIV. OF OIL, GAS & MINING

July 29, 2013

Attn: Zeke Clements
Utah Division of Oil, Gas and Mining
1594 West North Temple, Suite 1210
Box 145801
Salt Lake City, Utah 84114-5801

Re: Sundry Notices and Reports on Wells - Change of Operator and Transfers of Authority to Inject

Dear Zeke:

Enclosed for approval by the Utah Division of Oil, Gas and Mining, please find two originally executed Sundry Notices and Reports on Wells on Form 9, for the following 18 leases and wells (API # included):

<u>Lease #</u>	<u>Well Name</u>	<u>API Well No.</u>
UTU-20894	Wash Unit 2	43-037-31324 ✓
UTU-20895	Havasus-Federal 41-24	43-037-31279 ✓
UTU-20895	Havasus-Federal 42-24	43-037-31298 ✓
UTU-40361	Bannock -Fed 21-33	43-037-31425 ✓
UTU-52333	24-4 Kiva Federal	43-037-31745 ✓
UTU-52333	Navajo Federal 12-4	43-037-31395 ✓
UTU-52333	Navajo Federal 14-4	43-037-31321 ✓
UTU-52333	Navajo Federal 21-9	43-037-31267 ✓
UTU-52333	Navajo Federal 4-1	43-037-31112 ✓
UTU-52333	Navajo Federal 4-2	43-037-31161 ✓
UTU-52333	Navajo Federal 42-9	43-037-31263 ✓
UTU-52333	Navajo Federal 4-4	43-037-31179 ✓
UTU-52333	Navajo Federal 9-1	43-037-31001 ✓
UTU-56185	Arabian Federal 3	43-037-31287 ✓
UTU-56186	Havasus-Federal 11-19	43-037-31458 ✓
UTU-56186	Havasus-Federal 22-19	43-037-31278 ✓
UTU-58728	Navajo Federal 42-5	43-037-31261 ✓
UTU-58728	Navajo Federal 43-5	43-037-31317 ✓

APPROVED

AUG 19 2013

DIV. OIL GAS & MINING
BY: Raehee Medina

Also enclosed for the approval by the Utah Division of Oil, Gas and Mining, please find one originally executed Transfer of Authority to Inject on Form UIC Form 5 for the following seven wells:

<u>Lease #</u>	<u>Well Name</u>	<u>API Well No.</u>
UTU-20895	Havasus-Federal 42-24	43-037-31298 ✓
UTU-52333	Navajo Federal 12-4	43-037-31395 ✓
UTU-52333	Navajo Federal 14-4	43-037-31321 ✓
UTU-52333	Navajo Federal 21-9	43-037-31267 ✓
UTU-52333	Navajo Federal 4-1	43-037-31112 ✓
UTU-56186	Havasus-Federal 11-19	43-037-31458 ✓
UTU-58728	Navajo Federal 43-5	43-037-31317 ✓

Please return the approved documents for each well to:

Richardson Operating Company
4725 S. Monaco Street, Suite 200,
Denver, Colorado 80237.

If you have any questions, please do not hesitate to contact me at the number above or via email at land@richardsonoil.com.

Sincerely,



Ann Barthrop
Senior Land Analyst

Enclosures

RECEIVED
AUG 02 2013
Div. of Oil, Gas & Mining

Division of Oil, Gas and Mining
OPERATOR CHANGE WORKSHEET (for state use only)

ROUTING

CDW

X - Change of Operator (Well Sold)

Operator Name Change/Merger

The operator of the well(s) listed below has changed, effective:

4/1/2013

FROM: (Old Operator):

N0265-Citation Oil & Gas Corp

P O BOX 690688

Houston, TX. 77269

Phone: 1 (281) 891-1000

TO: (New Operator):

N2400-Richardson Operating Co.

4725 S Monaco Street, Suite 200

Denver, CO. 80237

Phone: 1 (303)830-8000

CA No.

Unit:

Kachina

WELL NAME	SEC	TWN	RNG	API NO	ENTITY NO	LEASE TYPE	WELL TYPE	WELL STATUS
See Attached List								

OPERATOR CHANGES DOCUMENTATION

Enter date after each listed item is completed

- (R649-8-10) Sundry or legal documentation was received from the **FORMER** operator on: 8/2/2013
- (R649-8-10) Sundry or legal documentation was received from the **NEW** operator on: 8/2/2013
- The new company was checked on the **Department of Commerce, Division of Corporations Database** on: 8/26/2013
- a. Is the new operator registered in the State of Utah: Business Number: 8776630-0143
- a. (R649-9-2) Waste Management Plan has been received on: N/A
- b. Inspections of LA PA state/fee well sites complete on: N/A
- c. Reports current for Production/Disposition & Sundries on: 8/19/2013
- Federal and Indian Lease Wells:** The BLM and or the BIA has approved the merger, name change, or operator change for all wells listed on Federal or Indian leases on: BLM Not Yet BIA N/A
- Federal and Indian Units:**
The BLM or BIA has approved the successor of unit operator for wells listed on: Not Yet
- Federal and Indian Communization Agreements ("CA"):**
The BLM or BIA has approved the operator for all wells listed within a CA on: Not Yet
- Underground Injection Control ("UIC")** Division has approved UIC Form 5 Transfer of Authority to **Inject**, for the enhanced/secondary recovery unit/project for the water disposal well(s) listed on: 8/7/2013

DATA ENTRY:

- Changes entered in the **Oil and Gas Database** on: 8/26/2013
- Changes have been entered on the **Monthly Operator Change Spread Sheet** on: 8/26/2013
- Bond information entered in RBDMS on: 8/26/2013
- Fee/State wells attached to bond in RBDMS on: N/A
- Injection Projects to new operator in RBDMS on: 8/26/2013
- Receipt of Acceptance of Drilling Procedures for APD/New on: N/A

BOND VERIFICATION:

- Federal well(s) covered by Bond Number: RLB0002500
- Indian well(s) covered by Bond Number: N/A
- a. (R649-3-1) The **NEW** operator of any state/fee well(s) listed covered by Bond Number N/A
- b. The **FORMER** operator has requested a release of liability from their bond on: N/A

LEASE INTEREST OWNER NOTIFICATION:

- (R649-2-10) The **NEW** operator of the fee wells has been contacted and informed by a letter from the Division of their responsibility to notify all interest owners of this change on: N/A

COMMENTS:

Citation Oil & Gas Corp (N0265) to Richardson Operating Co. (N2400)
Effective 1-April-2013

Well Name	Sec.	Township	Range	API No.	Utah Entity No.	Mineral Lease Type	Well Type	Well Status	Unit Name
HAVASU-FEDERAL 22-19	19	380S	240E	4303731278	10654	Federal	Oil Well	Producing	KACHINA
HAVASU-FEDERAL 41-24	24	380S	230E	4303731279	10654	Federal	Oil Well	Producing	KACHINA
ARABIAN FEDERAL 3	19	380S	240E	4303731287	10654	Federal	Oil Well	Producing	KACHINA
HAVASU FED 42-24	24	380S	230E	4303731298	10654	Federal	Water Injection	Active	KACHINA
WASH UNIT 2	13	380S	230E	4303731324	9975	Federal	Water Source	Active	KACHINA
HAVASU FED 11-19	19	380S	240E	4303731458	10654	Federal	Water Injection	Active	KACHINA

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

RECEIVED

AUG 02 2013

FORM 9

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

1. TYPE OF WELL OIL WELL ☐ GAS WELL ☐ OTHER Change of Operator (SWD)

2. NAME OF OPERATOR:
Richardson Operating Company

3. ADDRESS OF OPERATOR:
4725 S Monaco St. Suite 200 CITY Denver STATE CO ZIP 80237

PHONE NUMBER:
(303) 830-8000

5. LEASE DESIGNATION AND SERIAL NUMBER:
Federal UTU-20895

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
N/A

7. UNIT or CA AGREEMENT NAME:
NA

8. WELL NAME and NUMBER:
HAVASU FED 42-24

9. API NUMBER:
037-31298

10. FIELD AND POOL, OR WILDCAT:
KACHINA

4. LOCATION OF WELL

FOOTAGES AT SURFACE: 1970 N 461 E

COUNTY: SAN JUAN

QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: SENE 24 38S 23E

STATE: UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> NOTICE OF INTENT (Submit in Duplicate) Approximate date work will start: _____	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> REPERFORATE CURRENT FORMATION
	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> SIDETRACK TO REPAIR WELL
	<input type="checkbox"/> CASING REPAIR	<input type="checkbox"/> NEW CONSTRUCTION	<input type="checkbox"/> TEMPORARILY ABANDON
	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input checked="" type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> TUBING REPAIR
	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> VENT OR FLARE
<input type="checkbox"/> SUBSEQUENT REPORT (Submit Original Form Only) Date of work completion: _____	<input type="checkbox"/> CHANGE WELL NAME	<input type="checkbox"/> PLUG BACK	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> PRODUCTION (START/RESUME)	<input type="checkbox"/> WATER SHUT-OFF
	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> OTHER: _____
	<input type="checkbox"/> CONVERT WELL TYPE	<input type="checkbox"/> RECOMPLETE - DIFFERENT FORMATION	

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

Citation Oil & Gas Corp. has sold the captioned well to Richardson Operating Company and requests that they be named as Operator of Record effective 4/1/2013

Please release this well from coverage under Citation Oil & Gas Corp.'s Utah Statewide Bond # 104325628.

On behalf of Citation Oil & Gas Corp. I hereby certify that the foregoing is true and correct:

Sharon Ward Permitting Manager: Sharon Ward Date: 4/1/2013

By execution of this document, Richardson Operating Company requests the State of Utah to approve them as Operator of Record for the above captioned well and accepts responsibility for this well under it's Statewide Oil and Gas Lease Bond in favor of the United States Department of the Interior, Bureau of Land Management Bond # RLB0002500.

On behalf of Richardson Operating Company, I hereby certify that the foregoing is true and correct:

NAME (PLEASE PRINT) David B. Richardson, Jr.

TITLE President

SIGNATURE

David B. Richardson, Jr.

DATE

7-29-2013

(This space for State use only)

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

RECEIVED

AUG 02 2013

UIC FORM 5

Div. of Oil, Gas & Mining

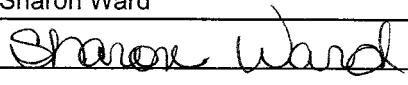
TRANSFER OF AUTHORITY TO INJECT

Well Name and Number HAVASU FED 42-24		API Number 43-03731298
Location of Well Footage : 1970 N 461 E County : SAN JUAN		Field or Unit Name KACHINA
QQ, Section, Township, Range: NE 24 38S 23E State : UTAH		Lease Designation and Number Federal UTU-20895

EFFECTIVE DATE OF TRANSFER: 4/1/2013

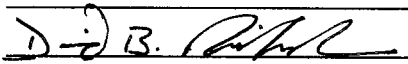
CURRENT OPERATOR

Company: Citation Oil & Gas Corp.
Address: 14077 Cutten Rd
city Houston state TX zip 77069-2212
Phone: (281) 891-1000
Comments:

Name: Sharon Ward
Signature: 
Title: Permitting Manager
Date: 4/1/2013

NEW OPERATOR

Company: Richardson Operating Company
Address: 4725 S Monaco St. Suite 200
city Denver state CO zip 80237
Phone: (303) 830-8000
Comments:

Name: David B. Richardson, Jr.
Signature: 
Title: President
Date: 7-29-2013

(This space for State use only)

Transfer approved by: 
Title: UIC Geologist

Approval Date: 8/7/13

Comments:

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB No. 1004-0137
Expires: October 31, 2014

SUNDRY NOTICES AND REPORTS ON WELLS
***Do not use this form for proposals to drill or to re-enter an
abandoned well. Use Form 3160-3 (APD) for such proposals.***

5. Lease Serial No.
N/A

6. If Indian, Allottee or Tribe Name
N/A

SUBMIT IN TRIPLICATE – Other instructions on page 2.

1. Type of Well

☐ Oil Well ☐ Gas Well ☒ Other WT

2. Name of Operator
Richardson Operating Company

3a. Address
4725 S. Monaco St. Ste. 200 Denver, CO 80237

3b. Phone No. (include area code)
(303)830-8000

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)
Lat: 37.474631 Long: -109.331146
S 34 E 34 T 38 R 23 E

7. If Unit of CA/Agreement, Name and/or No.

N/A UTU 20895

8. Well Name and No.

N/A HAVASU FED 42-24

9. API Well No.

43-037-31298

10. Field and Pool or Exploratory Area
Kachina Field

11. County or Parish, State
Garfield County, Utah

12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
<input type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input checked="" type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input type="checkbox"/> Other _____
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input checked="" type="checkbox"/> Temporarily Abandon	
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleat in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection.)

On May 2nd, 2015 Richardson Operating Company temporarily shut in it's Kachina Field. This includes the following wells:

Havasu Federal 22-19 - API: 43-037-31278
Havasu Federal 41-24 - API: 43-037-31279
✓ Havasu Federal 42-24 - API: 43-037-31298
Havasu Federal 11-19 - API: 43-037-31458
Arabian Federal 3 - API 43-037-31287
Wash Unit 2 - API: 43-037-31324

The field will remain shut-in until economic conditions improve.

Accepted by the
Utah Division of
Oil, Gas and Mining
For Record Only
Federal Approval Of This
Action Is Necessary

RECEIVED

MAY 11 2015

DIV. OF OIL, GAS & MINING

14. I hereby certify that the foregoing is true and correct. Name (Printed/Typed)
Cody Niehus

Title Geo Tech

Signature

Date 05/04/2015

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by

Title

Date

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Office

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on page 2)



GARY R. HERBERT
Governor

SPENCER J. COX
Lieutenant Governor

State of Utah

DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER
Executive Director

Division of Oil, Gas and Mining

JOHN R. BAZA
Division Director

March 3, 2016

Richardson Operating Co.
4725 S Monoco St. suite 200
Denver, CO 80237

SUBJECT: Pressure Test for Mechanical Integrity on Multiple Wells, San Juan County, Utah:

Gentlemen:

The Underground Injection Control Program, which the Division of Oil, Gas and Mining (DOGM) administers in Utah, requires that all Class II injection wells demonstrate mechanical integrity. Rule R649-5-5.3 of the Oil and Gas Conservation General Rules requires that the casing-tubing annulus above the packer be pressure tested at a pressure equal to the maximum authorized injection pressure or 1,000 psi, whichever is lesser, provided that no test pressure is less than 300 psi. This test shall be performed at least every five-year period beginning October 1982. The following wells now require a current test:

Navajo Fed 4-1,	API 43-037-31112	24	38S	23E
Havasus Fed 42-24,	API 43-037-31298			
Navajo Fed 14-4,	API 43-037-31321			
Havasus Fed 11-19,	API 43-037-31458			

Please make arrangements and ready wells for testing during the week of April, 25th, 2016, as outlined below:

1. Operator must furnish connections, and accurate pressure gauges, hot oil truck (or other means of pressuring annulus), along with personnel to assist in opening valves, etc.
2. The casing-tubing annulus shall be filled prior to the test date to expedite testing, as each well will be required to hold pressure for a minimum of 15 minutes.

3. If mechanical difficulties or workover operations make it impossible for the well(s) to be tested on this date the test(s) may be rescheduled.
4. Company personnel should meet a DOGM representative(s) at the field office or other location as negotiated.
5. All bradenhead valves with exception of the tubing on the injection well(s) must be shut-in 24 hours prior to testing.

Please contact me at (435) 820-8504 to arrange a meeting time and place or to negotiate a different date, if the date(s) specified is unacceptable.

Sincerely,

A handwritten signature in black ink, appearing to read "Mark L. Jones". The signature is fluid and cursive, with the first name "Mark" being the most prominent.

Mark Jones
Environmental Scientist

mlj/dj/js

cc: Dan Jarvis, Operations Manager
Well File